



# The Future of Central Urban Areas

**Sustainable Planning  
and Design Perspectives  
from Thessaloniki,  
Greece**

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Jonas Lamberg, Loukas Triantis (eds.)**



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# Preface

Lena Greinke, Nora Mehnen, Jonas Lamberg, Loukas Triantis

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European cities such as Thessaloniki and Hanover are facing major transformations and continue to experience increasing challenges today. These were exacerbated by the Covid-19 pandemic. There are for example changing shopping habits due to the increase in online retail, abandonment of stores in the stationary retail sector due to a lack of consumer buying, changing housing and working habits due to the increase in working from home, rising rents, and an increase in chain stores. Current challenges among European cities present similarities but also differentiations and local specificities. Different challenges like the pandemic or financial crisis affect Germany and Greece. They have intensified structural upheavals and impacted various sectors, such as health, retail, labour, housing, and mobility. Therefore, a number of these challenges are exacerbated.

The question arises as to how European and historic centres can be revitalized. This is where the university partnership “Centres of the Future – Challenges and Opportunities for Sustainable Development” (FutureCentres, <https://futurecentres.eu/>) comes in. Through collaborative teaching and research activities, the project aims (1) to study the inner cities and other centres in and around the two cities of Hanover and Thessaloniki, (2) to create a mutual understanding of the specific planning systems and cultures and (3) finally to develop recommendations for action for the transformation towards sustainable and resilient inner cities and centres. The project includes research exchanges, summer schools, excursions, workshops, and joint student projects to bring students, graduates, young scientists, doctoral candidates, and professors from Greek and German universities into exchange and networking. The German Academic Exchange Service (DAAD) funds research and teaching collaborations between Greek and German universities through the University Partnerships with Greece program. The Aristotle University of Thessaloniki (AUTH, Faculty of Engineering and School of Architecture) and the Leibniz University Hanover (LUH, Faculty of Architecture and Landscape, Institute of Environmental Planning) commenced a three-year collaboration in early 2023 as part of this partnership.

## Preface

This publication is the result of the Thessaloniki Summer School 2023 on „The future of central urban areas of Thessaloniki“ that took place from 30th May to 3rd June 2023 in Thessaloniki. The aim of the Summer School was to get an integrated perspective on a specific central neighbourhood of the city to formulate solutions addressing the current challenges. This requires an understanding of the historical development and an analysis of the current situation. Based on this evidence, it is possible to develop steering methods, governance proposals, and design solutions to contribute to Thessaloniki's attractive, resilient, and sustainable future. Firstly, the publication presents contributions from scientists and experts involved in the Summer School. Secondly, it outlines ideas and conceptual approaches for Thessaloniki developed by the participants in interdisciplinary groups.

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Hanover and Thessaloniki

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# Part 1







# Introduction

## Sustainable Centres of the Future?!

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Inner city development and in particular sustainable inner-city development is *en vogue*. In 2015, the General Assembly of the United Nations adopted the Agenda 2030 with the UN Sustainable Development Goal (SDG), especially SDG 11 Sustainable Cities and Communities with a focus on making cities and human settlements inclusive, safe, resilient, and sustainable. Recently, the 2023 SDG Summit confirmed the necessity to accelerate actions towards sustainable development up to 2030 (Statistisches Bundesamt 2023). But inner cities and local centres are facing strong changes and increasing challenges (Deutscher Städtetag 2021; Klemme 2022: 5; Rieper and Schöte 2022: 43). For example, in many cities in Germany and other parts of Europe, shopping habits are changing due to the increase in online retail or stores in the stationary retail sector get abandoned because of a lack of consumer buying and rising rents. The pandemic has exacerbated a number of these challenges (BearingPoint GmbH 2015; Bundesstiftung Baukultur et al. 2020; BMI 2021; Deutscher Städtetag 2021; Handelsverband Bayern e. V. 2021; Klemme 2022: 6), intensifying structural upheavals and impacting various sectors, such as health, retail, labour, housing, and mobility (Hesse and Lange 2023: 19). Increasingly, city centres are characterized primarily by a loss of functions (Anders & Stoltenberg 2022: 47; Rieper & Schöte 2022: 43). The framework conditions and background situations of different city centres are very heterogeneous (Renner 2022: 18). Cities react very differently to the challenges and therefore, each city centre requires individual and tailored future concepts that weigh all functions (Klemme 2022: 10f.). But how can city centres develop sustainably? What planning approaches and possible solutions exist? The following contributions explore different perspectives on sustainable inner-city development.

## Opportunities and Challenges from a Planning Practice Perspective

Katerina Danadiadou presents the planning practice perspective on the development of the Greek city of Thessaloniki. In particular, challenges and opportunities for the city are formulated. She introduces several strategic instruments, such as the General Urban Plan and the Municipal Plan for Reducing CO2 Emissions. Finally, she points out the importance of city partnerships such as the „100 Resilient Cities“ network, in which Thessaloniki is also involved.

## Life between buildings: Using Public Space: The history of Jan Gehl's book and the legacy of its philosophy for designing cities at human scale

Garyfallia (Fyllio) Katsavounidou introduces the perspective of Danish architect and urban planner Jan Gehl on public spaces using the book „Life between buildings: Using Public Space“. Based on the human scale, an attractive and sustainable form of urban planning is demonstrated in her contribution. Using New York as an example, she shows in detail how this can be achieved. She calls for a human-centered approach in urban design creating more liveable city centres in the future. Finally, she derives general recommendations in order to achieve a human centred form of urban planning that can be applied in different cities around the world.

## Thessaloniki for People: Developing a Postmodern Vision for Sustainable Urban Mobility

Jonas Lamberg's contribution deals with Jan Gehl's second well-known book: Cities for People. Based on this publication, he describes the emergence of modernist urban planning in the 20th century and its transformation into a criticised era of urban planning, especially caused by the shift away from human scale. He uses the example of Thessaloniki to describe the effects of modernist planning on the urban built environment. Finally, solutions are developed on how Thessaloniki can be developed towards a more sustainable future. These findings serve as a blueprint for many other cities around the world where modernist urban planning has also been practised in the past.

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# Opportunities and Challenges from a Planning Practice Perspective

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Exchanging ideas on urban issues is always very helpful in the difficult process of having to re-direct a dense and highly populated urban area towards a more resilient and sustainable future. The experience becomes even more exciting when young people are involved, who pose questions in such a clear and direct way that brings to light the pure essence of urban planning and design.

In this context, discussing about Hanover and Thessaloniki as two European cities of comparable size that have to resist or even reverse climate change, offered a great opportunity to develop the way we think and design about the future and to formulate an organized and target-oriented strategy.

As a small contribution to the research exchange program “Centers of the future”, I was invited to present the strategy of the Municipality of Thessaloniki regarding climate change from the perspective of urban planning.

Thessaloniki is the second largest city of Greece. The urban complex hosts 800.000 inhabitants and includes 7 Municipalities, with Thessaloniki representing the historic inner city and having the 40% of the population.

After a 10-year period of recession followed by the Covid19 pandemic, the city is now entering a new phase of development by becoming an attractive touristic destination and by attracting international interest for investments. The city at the same time faces considerable environmental issues, having one of the highest percentages of PM10 concentration, in combination with a dense urban fabric and a very low percentage of green areas per inhabitant.

Transforming the inner city and its historic center towards a sustainable and resilient future demands strategies in many levels of administration and in many sectors of action. Given that local administration in Greece has limited jurisdiction and autonomy, in the field of urban planning the effort was oriented towards proposals that would be realistic, widely acceptable and capable of reviving large areas, in order to make a difference.

In such a context, the Revision of the Municipality's "General Urban Plan" adheres to the concept of a compact city and maintains the existing building coefficients, since there are very few remaining plots that are not already built-up. Nevertheless, the Plan on the other hand proposes an extensive network of non-mechanical circulation in the city center, which aims to significantly reduce CO2 emissions, in combination with the imminent opening of the first METRO line for the city. Concerning the increase of green areas, the Plan focuses on four large brownfield areas, whose development potential is proposed to be combined with the creation of extensive parks with high green of metropolitan scale. There is also debate about developing few of the remaining unbuilt plots with high-rise buildings in order to decrease coverage for the creation of open areas.

Finally, there is the proposal to create a narrow but extensive green network along the trace of historic water-streams that no longer exist, as they were redirected to what is called as the "Peripheral Canal", in order to environmentally revive a large and very densely populated area within the southeastern sector of the Municipality, helping also by re-introducing air corridors within the city. Apart from the large scale of urban planning, other strategies to deal with climate change include action plans for energy consumption in municipal buildings and open public spaces, the creation of a "Municipal Plan for reducing CO2 emissions", the refurbishment of existing green areas, the increase in the use of cold materials, outdoor cooling interventions in order to reverse the urban heat island effect, information systems for very high or low temperatures and many more.

Finally, the Municipality of Thessaloniki, being one of the 100 Resilient Cities (100RC) Strategy Partners, shaped a Resilience Strategy based on eight city values (social cohesion, local identity and heritage, environmental management, health and wellbeing, youth empowerment, multi-stakeholder engagement, technology adaptation, economic prosperity), which represent Thessaloniki's identity and will guide how the city will plan for the future.

Hoping that Thessaloniki's approach contributes to the international discussion on mitigating climate change, we look forward to receiving more input from successful academic research programs like "Centers of the future".







# Life between buildings: Using Public Space: The history of Jan Gehl's book and the legacy of its philosophy for designing cities at human scale

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## Abstract

The scope of this essay is to provide a brief overview of the history and legacy of the book *Life between buildings: Using Public Space* written by Jan Gehl, Danish architect and urban consultant, renowned for his pioneering work towards the promotion of human-centered urban design. The paper starts with explaining the concept of the Human Scale in urbanism studies, both as a means to view the city focusing on what is happening at ground level and as a design priority. It continues with the story of the making of the book, back in 1971, and the impact it has had in establishing the human-centered approach in urban design as a rising trend, especially in the last two decades. The essay concludes with the three major lessons that we can extract from the book: (1) knowledge about human senses; (2) learning from observing; and (3) putting people first.

## 1. The Human Scale

### 1.1 How we understand the city differs depending on our point of view

The city is the subject matter of urban design, but primarily it is the habitat, the everyday environment for the human beings who live in it. How we talk about the city and how we examine it demands from an urban designer to temporarily shed the role of professional and to look at cities with the eyes of “the common man,” of ordinary people. As French novelist George Perec proposes in this book *Species of Spaces* (Perec 1997: 61-62):

*You must either give up talking of the town, about the town, or else force yourself to talk about it as simply as possible, obviously, familiarly. Get rid of all preconceived ideas. Stop thinking in ready-made terms, forget what the town planners and sociologists have said. [...] We shall never be able to explain or justify the town. The town is there. It's our space, and we have no other. We were born in towns. We grew up in towns. It's in towns that we breathe. When we catch the train, it's to go from one town to another town. There's nothing in-human in a town, unless it's our own humanity.*

How does “the common man” feel when he or she looks at the city from high above (see Fig. 1)? The philosopher Michel de Certeau in his classic study *The practice of everyday life* starts the chapter entitled “Walking in the city” with a description of the experience of looking at Manhattan from the 110th floor of the World Trade Center —a building that since September 2001 no longer exists (De Certeau 1984: 91-92):

*Beneath the haze stirred up by the winds, the urban island, a sea in the middle of the sea, lifts up the skyscrapers over Wall Street, sinks down at Greenwich, then rises again to the crests of Midtown, quietly passes over Central Park and finally undulates off into the distance beyond Harlem. A wave of verticals. Its agitation is momentarily arrested by vision. The gigantic mass is immobilized before the eyes. [...] Having taken a voluptuous pleasure in it, I wonder what is the source of this pleasure of “seeing the whole,” of looking down on, totalizing the most immoderate of human texts.*

The city, which is perpetually in motion, is “immobilized” when the human eye looks at it from high above, when the human being lifts up from the ground, and “his elevation transfigures him into a voyeur” (De Certeau 1984: 92). Down, on the ground, ordinary users of the city live their everyday experiences, walking in the city (see Fig. 2).



Fig. 1: Viewing the city from high above: Manhattan seen from the top of Rockefeller Center (own depiction, Jonas Lamberg)



Fig. 2: The walking experience of the city: In contrast to the view from above, in which vision dominates and immobilizes the observed object, everything is dynamic and all senses, especially kinesthesia, are important (own depiction, Jonas Lamberg)

Walking experiences are not based on visions, on what the eyes perceive, but on the body as a whole: the users of the city are walkers and trailers, having no distance from what goes on inside the bustling urban tissue. On the contrary, their body is “clasped by the streets that turn and return it according to an anonymous law” (De Certeau 1984: 92).



Fig. 3: If we see an aerial photograph of Central Park, it is hard to imagine what exactly goes on at ground level. Photograph: Leonhard Niederwimmer via Pixabay. Content license: Free to use.

If we see an image of Central Park from above (see Fig. 3), with the high-rise buildings of Manhattan lining its perimeter, it is hard to imagine what exactly goes on at ground level. How big is it? What type of vegetation does it contain? How does a person feel like when he/she is inside it? If we find ourselves inside the park, at eye level, the sense of it becomes much more detailed (see Fig. 4)

In spatial science, the view of a city from above is mostly represented by an urban plan: it allows us to comprehend undoubtedly many of its constituent elements. We can understand its geographical location, whether it is a seaside city or it is traversed by a river. We can see its street pattern and understand, for example, if it was planned based on an orthogonal grid or it grew organically or in other ways(?). We can even see if it has large open spaces. But we cannot perceive the experience of the user of this city, or its unique identity.





Fig. 4: If we find ourselves inside Central Park, at eye level, the sense of it becomes much richer ([https://upload.wikimedia.org/wikipedia/commons/7/7a/Central\\_Park\\_Scene\\_-\\_Manhattan\\_-\\_New\\_York\\_City\\_-\\_USA\\_-\\_01\\_%2841147016205%29.jpg](https://upload.wikimedia.org/wikipedia/commons/7/7a/Central_Park_Scene_-_Manhattan_-_New_York_City_-_USA_-_01_%2841147016205%29.jpg). Creative Commons Attribution-Share Alike 2.0 Generic license)

## 1.2 City space as the space of the everyday life

The perception of the city in our everyday experience, when we walk, stand, or sit in a public open space or look at it from the ground level of buildings is quite distinct. We are so accustomed to seeing the city from this viewpoint that we are often “blind” to what surrounds us. However, at ground level, every detail of the city is of utmost importance.

Georges Perec in his laconic, precise “attempt at exhausting a place of Paris,” (Perec 2010) in the book with the homonymous title, describes what he observed sitting for three days at a table looking over Place Sainte-Sulpice, in one of the surrounding cafés one day, in another one the other. He leaves out of the description the buildings and monuments and describes the ordinary things that one sees on the streets, sidewalks, and the square itself (from road signs and trees to benches and parking meters) and delves into the chorus of people of any age and gender as he watches their short passage in front of his field of vision: their trajectories, their facial expressions, the movements of their bodies, the objects that they carry, their groupings.

We can parallel Perec's investigating eye to the uncommon, different kind of observation we are called upon to do if the scope is to perceive the city at the human scale in depth. This kind of observation is not only visual but demands all of our senses, either when we sit or stand or when we are in motion, while we explore it by walking. The city is too big and too complex to understand it by observing only a small part of it. It demands to walk between its buildings, on its streets and in its public spaces, where our experience is framed by a wide variety of elements –from the height of the buildings and their morphology to their street facades and from the dimensions of a public space to whether or not there is a place to sit in it, whether this place is at an attractive and protected spot, or exposed to the sun when it is hot (Whyte 1980).

Often our observation entails observing how people use the city: What kind of activities take place between the buildings, in open spaces, on the sidewalks, crossings, along the facades? Where do people walk, how do they walk? Where do they sit or stand in public space and for how long? Why some public spaces are empty while others are full of people? And, most importantly, how can design create lively spaces, spaces which are safe and attractive, protected from annoying weather elements, with good conditions to walk through them and stay in them? These are the main issues that concern us when we seek to understand the city at human scale.

## 2. The human-centered approach in urban design

### 2.1 Life between buildings: An idea that started from a trip

About sixty years ago, Jan Gehl was graduating from the School of Architecture of the Royal Academy in Copenhagen (Matan and Newman 2016). One of his first projects was to design a new housing complex. It was exactly in that context, immersed as he was in his drawings, when his girlfriend, and later wife, Ingrid Mundt, a psychologist, started asking him questions he had never thought about before: How can he be designing spaces for living for people he knows nothing about? Without any idea of how they move around, what their needs are regarding their houses, whether they like spending time outdoors, what communal spaces they would like to have, etc. It was the first time that Gehl came to realize that there was a missing piece of the puzzle of his architectural training: he had never been taught anything about the human being, about *Homo Sapiens* and his/her natural capabilities, and about his/her needs and preferences.

In 1965, the then young architect, with his wife and their two little children, set off on a trip to southern Europe, mainly Italy but also Greece (ibid). In the villa-

ges and towns where they stopped, what attracted their attention were the lively public spaces. The medieval cores of Italian towns contained plenty of squares and streets teeming with life, full of people, who either on their own or in groups seemed to enjoy simply being in the open public space. The atmosphere could not be more different from the housing areas that were dominant back in Denmark, designed in the manner that young Jan had been trained to do. What was the secret for the livelihood of these urban districts?

Sitting for hours at a quiet corner of these public spaces, Gehl went on into documenting what was happening in the space in front of him, taking notes on a diagrammatic plan of it (see Fig. 5). He would observe, for example, that most people tended to walk along the facades of buildings, especially preferring them if there were arcades. If someone had to wait, he/she seemed to prefer having his/her back against a wall, a pillar, or a post. The facades of the buildings determined a street's attractiveness: shops with their windows, awnings, entrances, and steps, all made the street interesting, safe, and friendly. In the planning scale, a mix of uses and functions characterized these old towns, which were not transformed into ghost spaces after sunset, as it happened in the mono-functional centers of new urban areas or in the dormitory areas of the Modernist doctrine.



Fig. 5: Jan Gehl portrayed in a local newspaper article in Ascoli Piceno, Italy. He would sit for hours and days observing and sketching the life happening in front of him, in a public square. The title of the article is "He is not a 'beatnik' although he looks like it" (Courtesy of Jan Gehl)

“Something is happening because something is happening because something is happening,” Gehl wrote (Gehl 1987). Upon his return to Denmark, he had a unique chance to further these observations by analyzing the changes happening in his hometown, Copenhagen, as the main commercial street, Strøget, became partly a pedestrian street. It was a process that took years, but slowly the center of Copenhagen was transformed from a car-centered space to a people-centered space, as the network of pedestrian streets expanded through the years. Based on all these experiences and field research, Gehl thought of the idea of “life between buildings.” His book *Life between buildings: Using Public Space* (Gehl 1987), written in simple, easy-to-understand language, was first published in 1971 in Danish. It took sixteen years for the appearance of the English translation, in 1987, which helped in reaching a much wider audience and started to make its author famous worldwide. Today, it has been reprinted many times and published in more than thirty languages around the world. It is by now considered a classic text on urbanism.

## 2.2 Human-centered urban design philosophy today

In the years that have passed since the first edition of Gehl's book, there have been significant changes in urban planning and city design, but also – more generally – in living conditions, in the culture of cities, and even more so in the state of the planet as our habitat (Calthorpe 2011).

Especially from the turn of the millennium onwards, the world economic crisis and the COVID-19 pandemic, have also contributed to bringing cities and their design and management to the foreground of public discussion, as defining elements for individual and collective wellbeing. Both crises have been mainly urban crises, as cities and their inhabitants were impacted the most from them and had to develop resilient mechanisms to cope (Florida et al. 2020). The importance of public spaces at the scale of the neighborhood, as the places shaped and shared by local communities, in particular, becomes more and more acknowledged as a defining parameter for quality of life in a city, especially in relation to opportunities for fulfilling everyday needs for outdoor activities of recreation and sociability at close proximity to one's home (Moreno et al. 2021). Another important change is that, compared to 1971, when *Life between buildings* first appeared, the philosophy of human-centered approach in city design is by now a central and emerging trend, with various names: livable cities (Grot-haus 2023), human cities (Kotkin 2016), cities for people (Gehl 2010), human-scale cities (Burke 2016), life-sized cities (Colville-Andersen 2014). This prolific production of works – in terms of books, papers, projects etc. – and the rising public interest on the subject is a sign that in our era there is an ongoing turn



towards human-centered urbanism that would be unthinkable in the previous century.

There is a close relation between human-centered urban design and the notion of “life between buildings.” At the core of human-centered design lies the universally accepted concept that although the subject of design is physical space, this space would actually be void of meaning without the life that occurs in it, without the people who use it. When COVID-19 was declared a pandemic by the World Health Organization, governments around the world implemented forced lockdowns and mobility restrictions to contain its spread, resulting to the out-of-the-world experience of “empty” cities, which showed that public space without people is the most unfamiliar environment.

Human-centered approach of urbanism is based on a set of knowledge that is not limited to formal composition, taught in architecture and planning schools, or solely to rules and practices of regulatory urban planning. As a design practice, human-centered urbanism invites us to think about the users more than a design model or aesthetic preference. And in its core, it entails taking a moral stance as designers, in recognition of the responsibility one has when in charge of designing: it puts people first, the people who live, work, and move about in the city – the ones we so condescendingly call ‘users’, as Henri Lefebvre in his *Critique of Everyday Life* writes (Lefebvre 1991). As its compass, it has everyday life in the city, in its ordinariness and its exceptionality, at the same time.

### 3. Three lessons for urban designers

The philosophy of human-centered urban design is based on three pillars: (1) knowledge about human senses, a kind of knowledge that is often missing in architecture and planning curricula; (2) learning from observing public life, meaning that the observation of how people and space interact is valuable for designing better spaces; and (3) putting people first, from the planning to the microscale level, which means integrating a human-centered approach in all scales of spatial planning, from land use plans to microscale design.

#### 3.1. Knowledge about human senses

The history of urban form provides important evidence to the fact that until the dawn of Modernism, human settlements had always been designed so as to organically serve human needs (Mumford 1961). In particular, urban public spaces for movement and for gathering had been consistently formed, developed, and transformed through time with an instinctual knowledge of and ad-

adaptation to the human scale. Historic settlements and towns present a remarkable adaptation to topography, the local microclimate, and the various needs of users. Their open spaces have an excellent connection to the landscape, their site is central in the street network, their dimensions of a scale intimate to humans, while their “urban furniture” consists of organic, simple elements, such as stoops and stairs, which create excellent opportunities for staying in public space (Gehl 1987) (see Fig. 6).



Fig. 6: Open public spaces in historic towns, such as Venice, are made for human beings and are friendly to users of all ages (own depiction, G. Katsavounidou)

As Gehl (1987) points out in *Life between buildings*, this knowledge, however, about what constitutes a good public space was apparently “forgotten” in the 20th century. Caring for public spaces so as to serve, promote, and provide good conditions for public life has been very low in design priorities. Together with the promotion of abstract notions, analytical tools, and design models that were promoted by technocratic urban planning, the physical design scale was neglected in city design, although it is this exact scale that essentially defines the everyday life in a city (Appleyard and Jacobs 1982). The spaces for movement and for staying, appearing as colored surfaces in an urban plan, truly determine – with their dimensions, layout, morphology, urban furniture, building materials – what kind of public life there will be in that specific street or square;

whether people will use it or it will become a deserted place (Whyte 1980).

### 3.2 Learning from observing

An important argument in *Life between buildings* (Gehl 1987) is that the knowledge about what works and what does not in the public space, once instinctual, has to be rediscovered and become part of urban design education. In its basis, it is a practical knowledge, acquired through observing life in public space, where vision may be dominant, but all senses take part in the experience. For this end, the city is the perfect source field for acquiring this knowledge. As Jane Jacobs wrote, at the heyday of Modernism (Jacobs 1993: 9):

*Cities are an immense laboratory of trial and error, failure and success, in city building and city design. This is the laboratory in which city planning should have been learning and forming and testing its theories. Instead the practitioners and teachers in this discipline (if such it can be called) have ignored the study of success and failure in real life, have been incurious about the reasons for unexpected success, and are guided instead of principles derived from the behavior and appearance of towns, suburbs, tuberculosis sanatoria, fairs, and imaginary dream cities – from anything but cities themselves.*

There is not a more direct way of understanding, studying, and extracting knowledge about the human senses and how humans interact with space than observational study. As a methodology, it was developed through a series of researchers, with various objectives, tools, and analytical frameworks. Pioneer researchers of the field include British architect and planner, founder of the “Townscape” movement Gordon Cullen (1961), who used sketches to convey the visual perception of a person walking in the city and a few years later Kevin Lynch (1960) who introduced the concept of the mental image and worked with mental maps and interviews to show the importance of urban form for the everyday life of citizens. About the same time, Jane Jacobs (1993), an “ordinary citizen,” by mere observing through her eyes, pointed to the fact that planning interventions implemented in New York by Robert Moses were destroying neighborhoods with a vibrant street life and strong community ties, replacing them with dangerous and hostile housing complexes. A decade later, Oscar Newman (1972) studied which design elements in social housing projects were responsible for the lack of safety and their failure to create livable neighborhoods. Later on, William Whyte (1980) used various kinds of mapping and visual documentation to extract conclusions about how New York’s public plazas were being used, and Donald Appleyard (1981) studied the influence of vehicular traffic on urban streets and their profile, especially on the quality of life of the people who

live on them. These are few of the many examples of empirical studies what brought to the center of the urban design discipline the need to combine spatial studies with field observations on how people interact in public space and how space influences their everyday lives and especially sociability. It is among them that *Life between buildings* stands, forming a genealogical line of public life studies (Gehl and Svarre 2013)

Jan Gehl, in *Life between buildings* and in his subsequent studies, used many of these different observational methodologies, basing his theoretical approach entirely on first-hand, empirical research. He observed how people moved around and used the streets and open spaces. He studied in detail how various factors, such as the dimensions of a square or the facades of a street, influenced how a space is used, by whom and for how long. Based on this detailed analysis on how human senses work, he summarizes this human-space interaction into five main elements which are defining parameters regarding life between buildings (see Fig. 7):

1. *Presence or absence of walls between the street and the ground level of buildings.* To be able to see what is happening in the interior of the ground floor of the buildings lining a pedestrian passage makes it safe and attractive to walk on, adding to life between buildings.
2. *Long or short distances.* The dimensions of a public space are extremely important for ensuring that people using it will have the opportunity to see and hear each other, and in that respect, short distances are key.
3. *High or low speeds.* For hundreds of thousands of years, human senses have developed for the speed of the walking man. Therefore, when we experience the city by walking, this experience is much richer than the one we would have if we were driving. We have the time to see the details of the physical environment and to come to contact with other people.
4. *Multiple levels or one level.* Most people feel uncomfortable going up and down when moving around in urban space. The failure of many elevated or submerged public places shows that when it comes to vertical movement, human beings are particularly hesitant to change levels.
5. *Back-to-back orientation or face-to-face orientation.* In the microscale design of public spaces, we should keep in mind that, for example, placing benches back-to-back will definitely not promote contact between users. Being able to see others is the first and utmost prerequisite for any kind of social interaction.

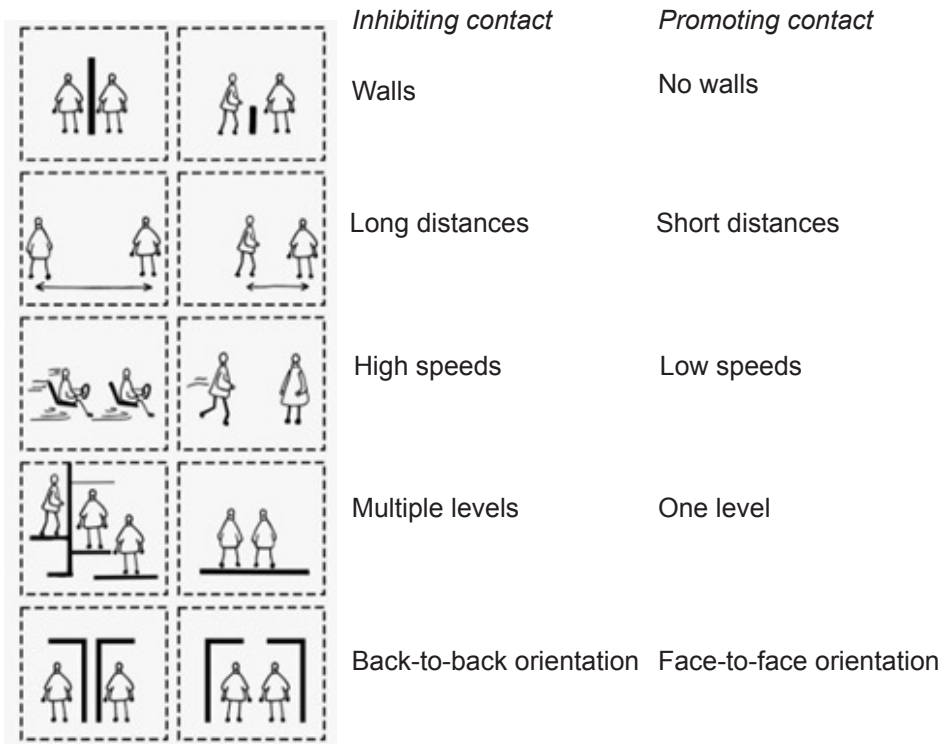


Fig. 7: How physical arrangement influences senses and communication, either inhibiting or promoting contact. Sketch: Evangelia Oikonomou, based on (Gehl 1987: 22).

### 3.3. Putting people first – from the planning to the microscale level

Emphasis on the intimate experience of the human being, the user of the city is at the core of the human-centered philosophy. However, human-centered urbanism is not confined to the scale of physical design only. To ensure that people are given priority, the microscale is often not enough (Gehl 1987). There is also the need for an urban planning approach that takes into account and prioritizes people, in the macroscale, too. Often it is in this macroscale decisions that the framework of life in a city is defined. This kind of decisions include the placement of various functions, distribution of land uses, definition of densities, and the planning of transit systems. It would be a mistake to try to study each such parameter on its own, since it is the interconnection of all of them that shapes the entire urban form. For human-centered city design, it is important to keep in

mind that the main idea – that of putting people first – in fact traverses all design scales, all the spectrum of design decisions taken on the level of the regulatory urban plan to the scale of physical design and that of the microscale design of streets and open spaces.

In this holistic approach, Gehl proposes to examine how the concept of life between buildings informs decisions on various scales through the lens of four binary oppositions, of four dilemmas:

1. *To Assemble or Disperse.* This opposition refers to large scale planning regarding mainly how land uses are distributed – for example, the doctrine of Modernism promoted a strong separation of uses and a territorial expansion of the city, especially through the creation of housing-only areas such as housing estates in the periphery of the central city or through extensive areas of single-family houses. To assemble uses, on the other hand, means that every part of the city is being used 24-hours a day, changing character or even users from morning till night, securing that there is always human presence and street life, as in the case of the compact city model.
2. *To Integrate or Segregate.* This dilemma is related to decisions about where specific functions – for example, a university – should be planned and developed; for example, would a separate campus, with specific borders work better for establishing a relation with the city, or would an urban campus, located in various buildings around the city, provide maximum benefits, both for the academic community and for the city? The same opposition can be applied in other city design parameters, such as transport. It shows how decisions regarding the integration or separation of various modes of mobility in the street network influence public life. Urban streets designed as traffic corridors, for example in the case of Los Angeles, create a totally different environment from an urban network in which pedestrians, cyclists, and – occasionally – motorists use the streets on equal terms, as in the case of traffic-calmed streets (see Fig. 8).
3. *To Invite or Repel.* Human beings are used to experiencing the city by walking, and when one walks, very detail of a street or open space becomes important. This dilemma signifies the need to incorporate in public space design well-planned elements that will ensure users enjoy safety (from traffic, from harsh weather), have plenty of opportunities (to sit and stay, to play, to spend time) and to be aesthetically pleased when using a public space. If we cater, as designers, to these needs, then people will feel invited to come, stay, and make a place “their own.”
4. *To Open up or Close in.* The fourth opposition refers to the importance of





Fig. 8: An example of integration: Pedestrians, cyclists and occasionally motorists share street space in the center of Delft, the Netherlands. Photograph: Lefteris Boziss.

facades and specifically of the ‘edge effect’ for life between buildings. To “open up” means that a space is surrounded by facades that permit walkers to see inside the ground level, that have physical elements such as steps or awnings that provide opportunities for stopping and taking a rest, or even staying and enjoying life unfolding in front of you. It is a positive experience to be able both to participate in what goes on in the public space and at the same time to be a secure, semi-private zone in front of residences, shops, cafés, workshops, or other street-level uses.

#### 4. Epilogue

The legacy of Jan Gehl’s book, a book written in simple language and with a wide use of examples, easy-to-grasp even by non-experts, is still very much alive today, more than fifty years after its first publication. Designing cities at human scale can be astonishingly easy if designers are trained in and become conscious of the importance of caring for human needs. To accomplish this, empirical observation is paramount, so that abstract notions such as, say, “mix of uses” or “active facades” become concrete, as part of personal, lived experience. This transformative learning process can contribute to applying such lessons learnt via empirical study into conscious design practice, as common-sense solutions to design problems.

It is quite optimistic to observe how cities around the world have been transformed in the past decade, reinventing themselves and showing how the human-

centered approach can be applied to towns and cities of all sizes – even in metropolises such as New York and Paris (see Fig. 9). In the midst of the environmental crisis, to which cities have unfortunately contributed and continue to do so, this approach is also a reply to the urgent need for cities to move away from a technocratic rationale and a car-centric mentality towards a humanistic view of urban issues, based on sustainable mobility and eco-friendly solutions.



Fig. 9: A "beach" along the Seine, where vehicular traffic used to dominate. (Sharat Ganapati, CC BY 2.0 <<https://creativecommons.org/licenses/by/2.0>>, via Wikimedia Commons [https://upload.wikimedia.org/wikipedia/commons/2/2b/Paris\\_Plage\\_July\\_25%2C\\_2012.jpg](https://upload.wikimedia.org/wikipedia/commons/2/2b/Paris_Plage_July_25%2C_2012.jpg))

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# Thessaloniki for People: Developing a Postmodern Vision for Sustainable Urban Mobility

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## Abstract

Modernist urban planning emerged in the 20th century as a solution to conflicts of use between industrial production and housing. However, these originally visionary guidelines are increasingly coming under criticism. Especially the resulting dominant car traffic causes problems today. In order to design more liveable and climate-resilient cities for the future, new planning approaches are needed. These are developed in the following article for the Greek port metropolis of Thessaloniki.

## 1. The emergence of modernist urban planning

For a long time in human history, living and working spatially coexisted next to each other. In the Middle Ages for instance, different guilds were separated by street, but people were mostly living and working in the same house. Almost two hundred years ago industrialisation fundamentally changed the cities in Europe eventually. The centuries-long neighbourhood of living and working now became a challenge due to harmful environmental impacts of factories and workshops. Due to the intensive use of coal and chemicals the air and water quality were poor and thus living conditions in the cities often inhumane (Eberth et al. 2022: 28).

In response to the challenges in the cities, architects and urban planners developed the “Charter of Athens” at the “Congrès Internationaux d’Architecture Moderne” in 1933 (Congrès Internationaux d’Architecture Moderne 1933). Important findings were that the city as a functional unit is subject to the main urban functions of living, working, recreation and movement and that these functions should be separated from each other. Thus, transport was supposed to play a major role in connecting the divided key urban functions. Based on the Athens Charter, ideal cities should locate the central business functions in the urban core as well as separated zones for industrial activities as well as housing in the outskirts. Additionally, the creation of satellite cities in the periphery dedicated to a purely residential function were intended. The proposed strict separation of living and working was thus implemented in order to create improved living conditions for the inhabitants of cities.

The implementation of these new urban planning ideals was supported by the emergence of new building techniques and materials. Reinforced concrete, for example, made it possible to erect taller buildings at lower costs. As a result, high-rise housing estates were implemented in the suburbs of many cities, providing daylight, green spaces and clean air for all. However, this structured and dispersed city also required an expansion of the transport infrastructure, as the urban functions were now separated. With the increasing spread of private cars in the second half of the 20th century, the „automotive city“ (car-oriented urban planning) became an important guiding principle of the modernist urban development in many cities (Eberth et al. 2022: 28).

In Thessaloniki the legacy of modernist urban planning and a focus on the private car are visible in many places, too. The extensively developed road network provides car-oriented transport within the city and features ring roads around the city centre, as they are typical for the “automotive city” (see Fig. 1).

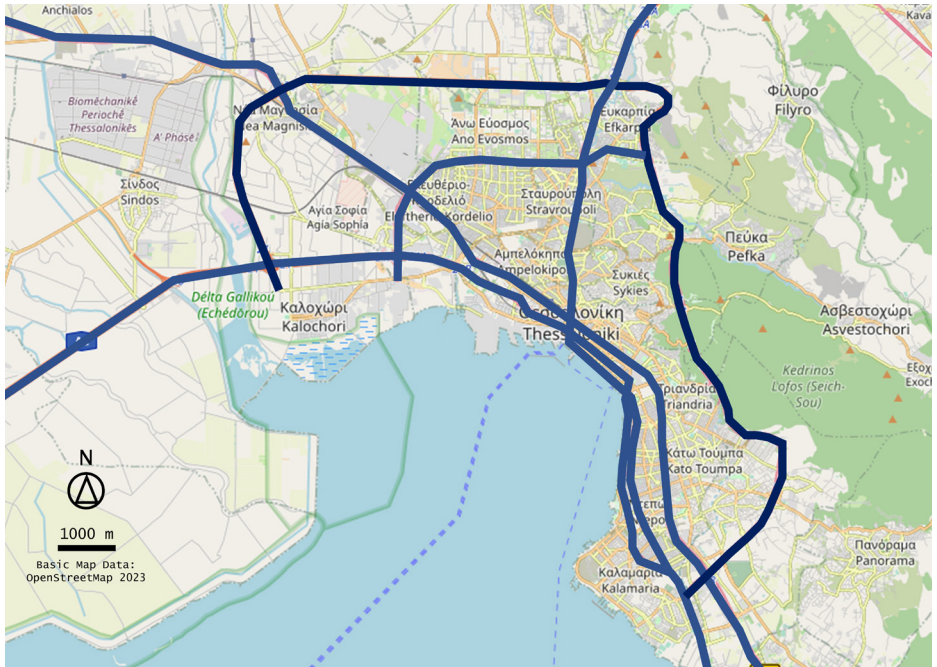


Fig. 1: The main road network of Thessaloniki as a legacy of the car-oriented city (source: own depiction based on OpenStreetMap data)

## 2. A model in transition

In the meantime, however, this originally visionary orientation of urban planning and its impacts are being criticised. Jan Gehl, Danish architect and urban planner, also points out in his book „Cities for People“ that this concept needs to be reoriented.: “For decades the human dimension has been an overlooked and haphazardly addressed urban planning topic, while many other issues, such as accommodating the rocketing rise in car traffic, have come more strongly into focus. In addition, dominant planning ideologies – modernism in particular – have specifically put a low priority on public space, pedestrianism and the role of city space as a meeting place for urban dwellers. [...] The traditional function of city space as a meeting place and social forum for city dwellers has been reduced, threatened or phased out.” (Gehl 2010: 3)

Car traffic itself is also being criticised. While it is needed in order to connect the separated functions of a modernist city on the one hand, its dominant impact also leads to the reduction of urban public life on the other (ibid.). In particular,

areas for pedestrian and bicycle traffic have been reduced. In the meantime, the rapid increase in car traffic leads to additional problems. In urban areas in particular, the local environmental impacts of motorised traffic, such as nitrogen oxides or noise, have a negative impact on a large number of residents (Lanzendorf & Klinger 2018: 30). Studies show that “ambient air pollution is a major environmental cause of morbidity and mortality worldwide. Cities are generally hotspots for air pollution and disease” (Khomenko et al. 2021: 124). The question of appropriate design of urban infrastructures becomes all the more important due to the effects of climate change (Eberth et al. 2022: 28). A higher heat load is to be expected in cities in the future (Warner 2018: 117 f.). Car-oriented urban infrastructures also cause an above-average emergence of urban heat islands and thus have a negative influence on the urban climate (Lamberg & Śnieg 2018: 119 ff.). In addition, the displacement of the other functions of the road needs to be mentioned (Zemlin 2008: 341).

In order to design cities for people as well as to protect the climate, mobility must be organised differently in the future. For this change to succeed, it is necessary to promote alternatives to the private car as part of a new urban transport policy: “the potential for a lively city is strengthened when more people are invited to walk, bike and stay in city space” (Gehl 2010: 6). Additionally, the implementation of a well-developed and efficient public transport system as an attractive alternative to the use of private cars is also necessary (Prieps 2019: 145 & 167). This shift in transport policy needs to be aligned „with a significant reduction in car mileage and the number of passenger cars. A change in mobility behaviour is also necessary“ (Blanck & Zimmer 2018: 142). Various studies show that a change in the urban mobility behaviour is possible. Young people living in cities in particular are increasingly no longer interested in owning a car and obtaining a driving licence. A change in values can be observed. Especially the car is no longer seen as a status symbol (Monheim 2018: 133).

### 3. Potentials arising from modernist planning in Thessaloniki

As a result of modernist city planning, also many places in Thessaloniki are dominated by the car. This not only limits other forms of mobility, such as walking, but it also causes diverse risks for its participants. Car traffic itself is also negatively affected by the increasing number of vehicles parked in public space. Furthermore, a significant decline in public life can be observed. Where the car dominates, urban life no longer takes place. The limited resource of space in the city is used below average and is monofunctionally dominated by the car (see Fig. 2).





Fig. 2: The dominance of the car hinders the emergence of public life (own depiction)

In order to overcome car-oriented planning concepts a significant reduction in car traffic is proposed for Thessaloniki as well. Alternative forms of mobility including public transport, bicycling and walking may possibly be promoted within the motorway ring road in the future. Intercity and regional transport relations would not be affected by these measures, as the ring road is still in place.

#### 4. Public transport as a backbone for future urban mobility in Thessaloniki

As has been made clear in the previous remarks, the focus on the car in cities reduces public urban life. If the city centre can be reached comfortably by public transport instead of the private car, new space for urban life can be created in the city centre. To promote alternatives to the use of the private car, the expansion of an efficient public transport network is important. Especially trams and light rails can provide solutions as they significantly reduce local emissions of polluting gases (Ortego et al. 2017: 387f). As vehicles are parked in depots on the outskirts of the city, fewer parking space is needed in the city centre. Instead, social activities can be promoted. Tram tracks can also be developed as a part of vibrant public areas, unlike streets. New space can thus be created for pedestrians or even green areas (grass tracks).

New transport development in Thessaloniki may also include local public transport in order to provide an attractive and high-capacity alternative to the use of private cars in the city. The implementation of a metro line, which is currently under construction (Attika Metro 2023), could be part of a solution. However, it is important that this mode of transport is expanded from an isolated line to a city-wide network in the future. Alternatively, the metro could be supplemented by a light rail system. As evidence from Berlin shows, the construction costs for an underground can be ten times higher than for a light rail (Tagesspiegel 2015). Significantly lower construction costs could lead to a city-wide public transport network more quickly, which is necessary to reduce the impacts of car traffic on the urban environment. The former tram network of the city demonstrates, that a light rail system in the city can successfully be implemented (see Fig. 3).

Thus, a well-developed public transport system is necessary to overcome modernist planning ideals. Furthermore, the promotion of walking and cycling is also essential in order to enable sustainable first and last mile mobility in the city. These measures may particularly promote the increase of urban life in the streets of Thessaloniki.





Fig. 3: Tram at the Galerius Arch (Thessaloniki Tourism Organisation)

## 5. Walking and cycling stimulating attractive urban life in the city centre

The promotion of cycling and walking may form the core of a new urban transport policy in Thessaloniki: “Compared with other social investments – particularly healthcare costs and automobile infrastructure – the cost of including the human dimension is so modest that investments in this area will be possible for cities in all parts of the world regardless of development status and financial capability” (Gehl 2010: 7). In particular, there is a high demand for well-designed public spaces as demonstrated by the newly designed section of the waterfront promenade in Thessaloniki. Slow forms of mobility such as walking or cycling are being promoted and as a result a high level of human interaction is created here (see Fig. 4).



Fig. 4: Attractive urban taking place at the waterfront promenade in Thessaloniki (own depiction)

The existing qualities of this area may now be transferred to other parts of the city centre in order to overcome car-oriented planning ideals. This is especially possible by converting areas for car traffic into pedestrian zones. In particular, there is an opportunity here to reconnect the waterfront area with the old town by improving the walkability of the city centre. Additional measures can also support the promotion of walking. Well-chosen examples can be found in various parts of the city. For example, the indication of distances based on calories may motivate people to walk (see Fig. 5).



Fig. 5: Promoting pedestrian traffic in Thessaloniki (source: own depiction)

In addition to walking, cycling can also play a significant role in a postmodern city (Rissel et al. 2010: 1). This mode of transport is on the rise as the new waterfront promenade in Thessaloniki shows. In the future it can be an opportunity to develop a city-wide cycling route network in order to enable a shift from car traffic towards more sustainable modes of transportation.

## 6. A new strategic vision for urban development in Thessaloniki

In summary, a new strategic vision may possibly be developed for Thessaloniki (see Fig. 6). There are many opportunities to overcome the city's car-oriented modernist legacy in order to promote a city for people. This includes rail-based public transport as well as an extensive network of cycling routes (orange area). The city centre with all its relevant functions can thus still be easily reached by everyone. In particular, the urban core of the city is redefined on the basis of a

human scale. Especially walking is prioritised here (green area).

This contribution shows that the development of a postmodern vision for Thessaloniki is necessary and possible. The present proposal can now be sharpened on the basis of a dialogue with civil society and local politics. It is likely that a Thessaloniki for the people can also become a Thessaloniki for all.

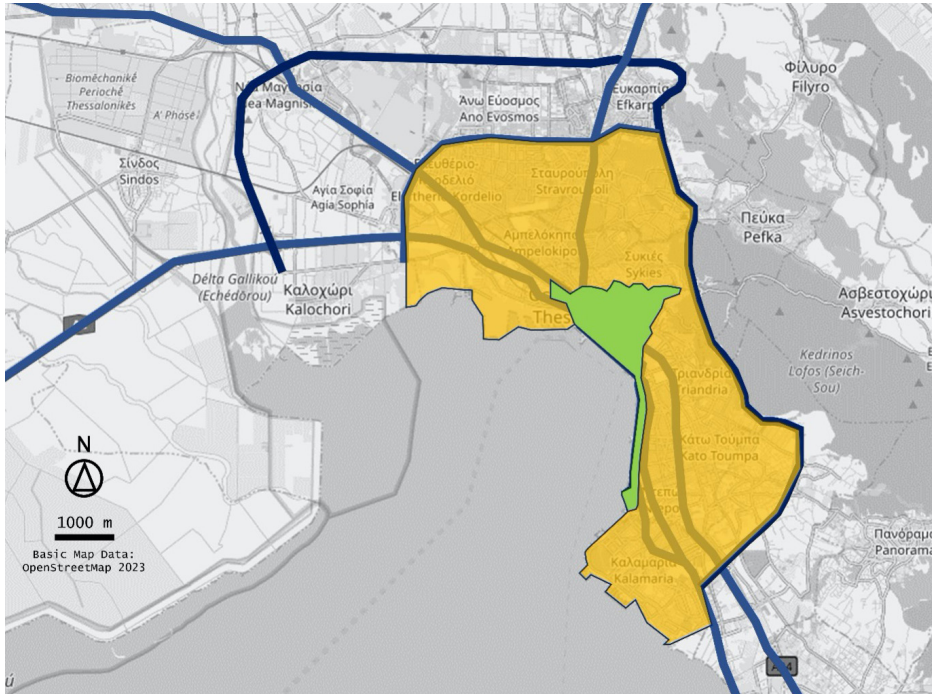


Fig. 6: Possible strategic target picture for a postmodern Thessaloniki for People (source: own depiction based on OpenStreetMap data)

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# Part 2





# Introduction

## Sustainable planning perspective approaches in Thessaloniki

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Like most Greek urban centres, Thessaloniki has been severely affected by the economic crisis of the 2010s. Over the last fifteen years, the city has gone through significant transformations. Urban development trends included inner-city decline and urban sprawl in the periphery, privatization trends, new real estate development projects and infrastructure developments, an ageing building stock and mobility challenges, while a series of plans, and urban strategies have tried to deal with urban challenges in times of crisis and climate change (Athanassiou and Christodoulou 2019). Recent evolutions like the Covid-19 pandemic as well as the increasing pressure of tourism activities on housing affordability (Hatziprokopiou, Karagianni and Kapsali 2021) also influence the city's development.

Therefore, this year's summer school deals with the future of central urban areas of Thessaloniki. The aim is to get an integrated perspective on a specific central neighbourhood of the city to formulate solutions addressing the current challenges. This requires an understanding of the historical development and an analysis of the current situation. Based on this evidence, it is possible to develop steering methods, governance proposals and design solutions to contribute to Thessaloniki's attractive, resilient and sustainable future.

This year's study area is the neighbourhood of Vardaris-Xirokrini (Central Train Station), a key characteristics district in the Northeast of the inner city (see Fig. 1).

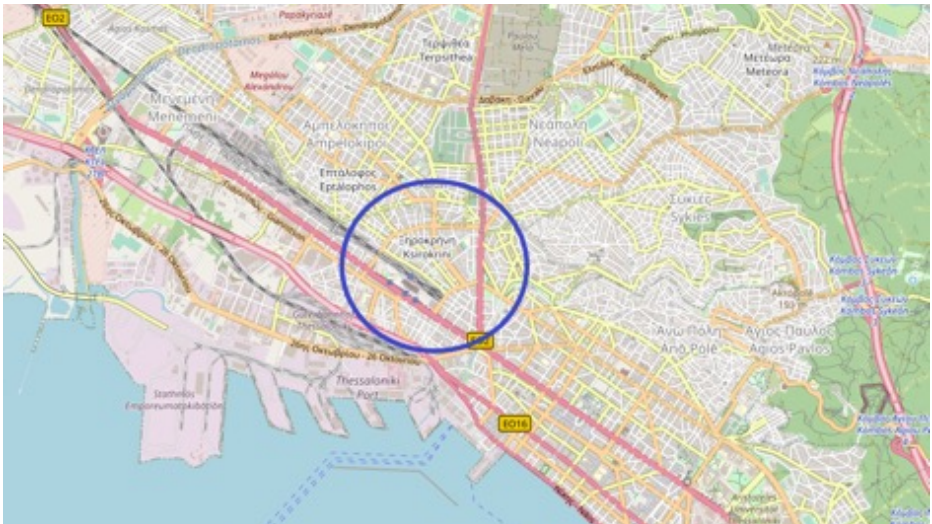


Fig. 1: The study area: the neighbourhood of Vardaris-Xirokrini (Central Train Station)  
Source: OpenStreetMap, Open Data Commons Open Database License (ODbL)

Within the university partnership “Centres of the Future – Challenges and Opportunities for Sustainable Development” (FutureCentres, <https://future-centres.eu/>) between the Aristotle University of Thessaloniki (School of Architecture) and the Leibniz University Hanover (Institute of Environmental Planning) funded by the German Academic Exchange Service (DAAD) from 2023 till 2025 the Summer Schools aim to analyze different challenges of inner cities and develop solutions. During the Summer Schools, the participants (see Fig. 2) are brought into exchange in interdisciplinary teams to work on specific topics. The framework program of the Summer Schools consists of thematic excursions, interdisciplinary workshops, group work and presentations.

From 30th May to 3rd June 2023, the Thessaloniki Summer School 2023 on „The future of central urban areas of Thessaloniki“ took place. In five small groups, the students analyzed different topics in the neighbourhood of Vardaris-Xirokrini. All the groups, together with tutors and staff, visited the area, walked around and observed the field, while enriching their analyses with notes, photographs, and sketches. They shared experiences with one another and also had the opportunity to discuss the area’s current transformations and challenges with a local NGO dealing with social integration issues. Questions arose like, how did the study area develop? How does the social structure and participation look like in the neighbourhood? What is the local traffic and infrastructure like? What is the quality of public and green spaces? What are the challenges for the

built environment, housing, retail and productive activities? How do planners deal with the challenges? What participation formats are there? Which concepts need to be developed? What kind of (planning) strategies or approaches might improve the local conditions?



Fig. 2: Group photo (own depiction)

Before starting the task, the students were provided with useful materials, such as maps of the district, and topic-related literature to prepare themselves and support their knowledge with valuable information. During a workshop by Jonas Lamberg, the participants gained an insight into the impact of 20th-century urban planning concepts on today's urban life. Afterwards, the small groups worked together on selected chapters from the book „Cities for People“ by Jan Gehl and then presented their proposed solutions for a more humane and environmentally friendly city with the help of posters. The results formed a „Wall of Solutions“ (see Fig. 3).

Furthermore, thematic keynotes were held during the Summer School to broaden the knowledge of the students on sustainable urban development. Katerina Danadiadou from the Municipality of Thessaloniki presented the history and challenges of urban development in Thessaloniki as



Fig. 3: Wall of Solutions (own depiction)

well as future strategies and projects of the city. In addition, Garyfallia Katsavounidou from the School of Spatial Planning and Development, Faculty of Engineering at the AUTH explained the impact of car-oriented planning on cities and stressed the importance of looking at cities not only from an overarching perspective, but also from a human dimension. In addition, Ass. Prof. Loukas Triantis spoke about the current trends and challenges of the Greek planning system and Prof. Dr. Axel Priebts gave a lecture on inner cities in Germany and devoted himself in particular to a detailed look at Hanover.

On the last day of the Summer School, the students presented their ideas, strategies and planning approaches, which are included in the five following papers:

### Modern history and past development of Thessaloniki

This first paper examines the changes in the urban structure of the city of Thessaloniki over time and analyses the impact of events such as fires, population changes, and reforms on the city. By taking a comprehensive look at historical events and developments, a better understanding of urban development and the significance of Thessaloniki as a cultural and historical centre is achieved. Thessaloniki's rich history spans millennia, showing its evolution from ruins to a resilient modern metropolis. Diverse architectural styles shape the city, from Hellenistic to Byzantine to Ottoman. Centuries of migration have created a multicultural base with potential for future integration. The paper concludes that Thessaloniki's fascinating history and complex social fabric highlight its significance by linking the past and present, providing essential insights for future solutions. The paper emphasises the importance of preserving Thessaloniki's assets for future generations facing new challenges.

### More life in Vardaris

The second paper focuses on social structure, demography, urban management and participation by analysing the quality of public space in the case study of Vardaris. Also, insights from the program „Mais Vida nos Morros“ (More life in the Hills) in Recife, Brazil are presented as inspiration. The group introduced a public policy program, that focuses on urban innovation and resilience with citizen participation, and proposes specific ideas for improving the Vardaris area, including colourful aesthetics and the creation of a green pathway.

## EquiCity: Creating a Livable Future for All

The paper analyses the economic and housing situation in Thessaloniki, particularly focusing on the Vardaris and Xyrokrini districts. It discusses the relationship between urban development, economic resources, and resident housing. The article mentions the role of private investors in shaping gentrification processes and advocates for a balance between economic growth and preserving the neighborhood's character. Thessaloniki's economic landscape, driven by tourism, port activities, industry, and education, sets the backdrop for the discussion. The Vardaris and Xyrokrini districts, despite their central location, face economic challenges, manifested in dilapidated infrastructure and high unemployment rates. The article highlights the need for interventions to enhance living conditions, such as improving security and regulating Airbnb usage. Finally, the study proposes regulations to strike a balance between economic growth and housing affordability while fostering a sustainable future for these neighborhoods.

## Exploring Thessaloniki: The Evolution and Impact of Urban Public Spaces and Green Areas

The overarching topic of the following paper is public and green spaces and their role in resilience in the context of climate change. The paper presents an analysis of urban public spaces and green areas regarding their evolution and impact. Thessaloniki is a city with limited public and green spaces amidst its dense urban fabric. Compared to European standards, Thessaloniki has one of the lowest ratios of green space per resident. After analysing the current situation, group 4 proposes several approaches for solutions and measures, such as prioritising the expansion and improvement of public and green spaces, incorporating more natural elements, ensuring proper water management infrastructure, adopting inclusive and people-centred design principles, allocating sufficient resources for maintenance.

## Revitalizing Public Spaces and Promoting Social Cohesion through a Sustainable Urban Design: Case Study in the Xirokrini-Vardaris Area of Thessaloniki

The last paper, by group 5, presents a comprehensive site analysis of the Xirokrini-Vardaris area with a focus on urban design and built environment, transport and infrastructure. Challenges such as isolation from an abandoned train station, car-centric dominance of parking, underutilized green spaces, and lack

of vibrant social areas were identified. To address these challenges, sustainable interventions that aim to transform the area into a vibrant and sustainable urban environment are proposed. One proposal is for example enhancing social housing with vegetation green walls for microclimate regulation.

Some of the results of the summer school are presented on Uuurble (<https://uurble.de/>). Uuurble is an Internet-based platform dedicated to researching and describing cities and urban neighborhoods and enabling their virtual exploration. Social, geographical, historical, ecological and urban planning aspects are central to this. Political, economic and cultural structures are also of research interest. Uuurble is aimed at teachers, students and researchers, who can write their own contributions and publish them on the platform. It can be used in several ways: as a research tool and knowledge platform, as a teaching tool for schools and universities, or simply as a constantly growing collection of extraordinary places.

### List of participants

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# Modern History and past development of Thessaloniki

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Students

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## Abstract

Thessaloniki is a significant crossroad between Europe and the near and middle east and has had a complex and fascinating history throughout the centuries. The city was founded in 315 before Christ and has experienced various epochs. The social and urban diversity of Thessaloniki reflects the different influences of these epochs, ranging from Hellenistic ruins to Byzantine churches and Ottoman buildings, making Thessaloniki a melting pot of different cultures and influences. The influence of Greek culture and identity has persisted over time, but traces of other cultures have remained visible in the city.

This paper examines the changes in the urban structure of the city of Thessaloniki over time and analyzes the impact of events such as fires, population changes, and reforms on the city. By taking a comprehensive look at historical events and developments, a better understanding of urban development and the significance of Thessaloniki as a cultural and historical center is achieved.



Fig. 1: The white tower of Thessaloniki (Own depiction, 2023)

## 1. Introduction

The present study primarily concentrates on the urban history of Thessaloniki from the 19th century onwards, as these historical events directly influenced the city's development. Nevertheless, a brief exploration of the origins and foundations of the city is necessary to gain a deeper understanding of the complex interplay between social and urban structures, as well as the societal factors involved.

The city of Thessaloniki (Saloniki) was founded in 315 BC and has always played a vital role as a connecting hub between Europe, parts of Asia, and the northern Balkans. With its early-established roads like the Via Egnatia and its harbor linking the Balkans to the maritime routes of the Eastern Mediterranean, Thessaloniki evolved into a significant center for trade, administration, and culture. Throughout successive epochs of Hellenistic, Roman, Byzantine, and Ottoman rule, the city's architecture and urban planning were influenced and shaped by these different periods (Hastaoglou-Martinidis 2011: 493).

## 2. The Influence of Ottoman Rule on the City

During the 15th century, a large number of Sephardic Jews migrated and settled in Thessaloniki, adding to the city's cosmopolitan character. The Ottoman Empire conquered Thessaloniki in 1430, and the city remained under Ottoman rule until the early 20th century (Yannopoulos et. al 2017: 469). In the 17th century, Thessaloniki emerged as the leading trade center in the Balkans. Until 1869, the city was enclosed by Byzantine walls that had preserved its spatial structure since the 7th century. Within these walls, the inhabitants lived segregated by religion and ethnic background (Yerolymbos 2018). By the early 20th century, Thessaloniki was a diverse city with a population of approximately 150,000 people. Christians, Jews, and Muslims resided in separate neighborhoods. The Turkish population primarily occupied the upper areas of the city, while the Jewish community settled near the docks and the harbor. The Christian population was concentrated along the Via Egnatia and around the cathedral. The commercial sector and the European quarter were located in the western part of the city (Hastaoglou-Martinidis 2011: 494).

In 1839, under Ottoman rule, reforms were implemented that would have a significant impact and bring about substantial changes in the social structures of Thessaloniki (Papadam n.d.: 5). This series of urban reforms are commonly known as the Tanzimat and as a result, these reforms had significant effects on the form and design of cities and communities within the empire (Strohmeier 2018: 22).

In 1869, the coastal walls were demolished to make way for a spacious waterfront promenade. Over the next two decades, the northern and southern walls were also removed (Yerolymbos 2018). The demolition of the coastal wall marked a turning point in the cityscape and paved the way for the emergence of new neighborhoods both to the west and east of the historical center (Hastaoglou-Martinidis 2011: 494). During this time, Thessaloniki developed into a modern metropolis within the empire, while still maintaining a religious and conservative atmosphere. Extensive improvements were made to the railway infrastructure and new port and industrial facilities were constructed to strengthen political relations with Western Europe (Papadam n.d.: 5).

The reforms also had an impact on the social structure of the city. The alignment of legislation with European standards and the granting of equal rights to non-Muslims attracted new population groups to the city, including administrators, entrepreneurs, traders, and employees. Despite the modernization efforts, some challenges persisted (Strohmeier 2018: 22), such as economic fluctuations, a lack of social housing, poor sanitary conditions in the city, and the emergence of slums (Yerolymbos 2018).

### 3. A Sequence of Devastating Catastrophes

However, the balance of power in Thessaloniki was about to shift during the Balkan Wars. In 1912, Thessaloniki was annexed by Greece during the First and Second Balkan Wars, including its strategically important port. At that time, Thessaloniki was a melting pot of various ethnic groups and religions, including Muslims, Jews, and Orthodox Christians. The capture of the city did not initially lead to significant changes in terms of population composition and administrative structures in the religious and political centers (Papadam n.d.: 7). However, a major catastrophe was about to alter the course of Thessaloniki's history in 1917.

A significant turning point in the city's history was the Great Fire on August 18, 1917. This fire destroyed large parts of the city at that time, including a significant portion of the Jewish quarters, resulting in the destruction of 45 synagogues, and devastating much of the historical housing stock, leaving more than 70,000 people homeless (Hastaoglou-Martinidis 2011: 495). The fire's damage also affected the city's water supply and the distribution network was severely harmed (Yannopoulos et. al 2017: 469). This catastrophe had dire effects on Thessaloniki's society and economy. Traditional Ottoman-era housing and structures were entirely destroyed. The city was thus faced with the challenge of restoring the destroyed areas (Strohmeier 2018: 124).

The renovation of Thessaloniki's historical center in the interwar period after the fire brought about comprehensive spatial and sociopolitical reforms (Yerolymbos 2018). New roads were widened to accommodate increasing traffic, and the city developed into a modern metropolis (Strohmeier 2018: 124). Between 1922 and 1930 extensive measures and large-scale infrastructure projects were implemented (Yannopoulos et. al 2017: 469). The liberal government under Eleftherios Venizelos commissioned the newly established International Town Planning Committee, led by Ernest Hébrard, a renowned French architect, to redesign the fire-affected area (Papadam n.d.: 7). The implementation of the plan differed from the original intentions, partly due to conflicting interests between the planners and property owners. After Venizelos' defeat in 1920, the initially proposed city plan was modified. Open spaces were reduced, and plots were made smaller (Hastaoglou-Martinidis 2011: 497). Ultimately, only the plan for Thessaloniki's historical center was realized. In this way, the rejuvenation of Thessaloniki's historic center not only reconstructed physical structures but also revitalized the urban fabric, redefining the city's social, economic, and spatial dynamics.

### 4. Greco-Turkish War and the "Asia Minor Disaster"

The Greco-Turkish War from 1919 to 1922 had significant implications for the development of Thessaloniki (Kampouris 2021). After the war, Greece and Turkey agreed to implement a population exchange, which led to a large-scale forced resettlement between the two countries (Strohmeier 2018). Prior to this, Thessaloniki had a history of migration. Unlike earlier voluntary migrants, refugee integration was slower and tougher (Murard 2022: 8), relying on religion, not ethnicity (Wikipedia 2023 b), causing social and spatial segregation (Strohmeier 2018). Between 1922 and 1930, approximately 130,000 refugees arrived in Thessaloniki, exacerbating the existing problem of the housing shortage that had been caused by the fire (Strand Ellingsen 2018: 6).

The refugees who arrived between 1922 and 1930 were mainly accommodated in the countryside surrounding the city (Mazonakis 2022). Over time, more than 50 colonies were established outside the city center, leading to spatial segregation. Thessaloniki rapidly expanded in all directions, encompassing more than 1,500 hectares at that time (Hastaoglou-Martinidis 2011: 499). The influx of refugees not only accelerated urbanization rates (ibid.: 501) but also contributed to higher economic growth and promoted industrialization (Murard 2022: 19).

### 5. The city in World War II and the post-war development era

During World War II, Thessaloniki was occupied by the Nazis in 1941. They deported almost all of the Jewish population of Thessaloniki to Auschwitz and Birkenau concentration camps, where they were horrifically murdered, along with other European Jews, until 1943 (Naar 2013: 9). Only 2,000 Thessaloniki Jews survived. After 1943, there was little left of the Jewish communities that had significantly shaped and influenced the city's history and development for millennia (Freund 2017).

After the war, the city and its economy began to rebuild. To address the urgent need for housing, the polykatoikia typology was introduced, which consists of

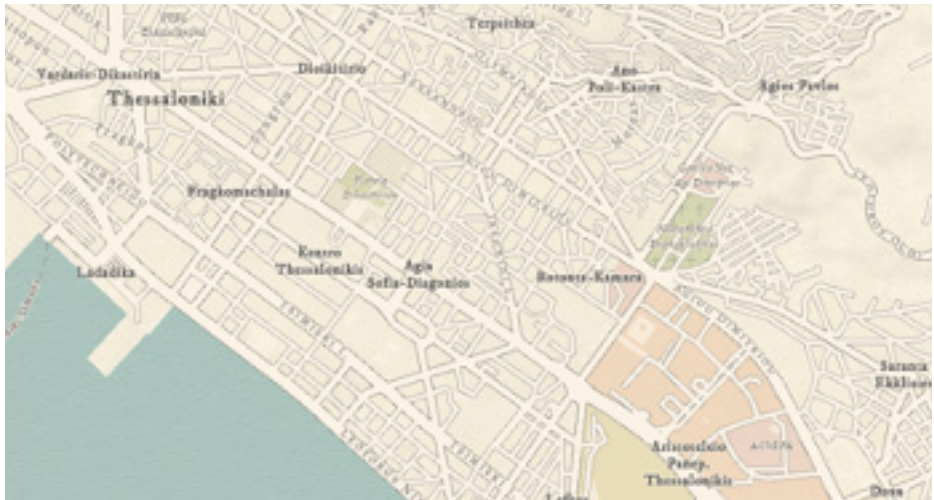


Fig. 2.: An overview of the current street network of Thessaloniki (This map is generated using ArcGIS Pro 3.1.2, GIS Professional Advanced)

large residential blocks and became a symbol of post-war architecture in Greece (Strand Ellingsen 2018: 6).

From the 1950s to the early 1980s, Thessaloniki witnessed (re)industrialization, which played a significant role in shaping its modern character. The city remained an important transportation hub in Europe, with a major airport (HCAA ELENG 2023) and a bustling train station. The port of Thessaloniki, known for its strategic significance in times of war and for trade, continued to be the largest port in the Aegean Sea, contributing to the city's economic growth and development.

## 6. Conclusion

## Modern History and past development of Thessaloniki

Thessaloniki's rich history spans millennia, showing its evolution from ruins to a resilient modern metropolis. Diverse architectural styles shape the city, from Hellenistic to Byzantine to Ottoman. Centuries of migration have created a multicultural base with potential for future integration.

Urban design, influenced by fires, demographics, and reforms, defines Thessaloniki. Despite changing rulers, its multicultural heritage endures. Thessaloniki fosters a harmonious blend of Greek and diverse cultures.

Thessaloniki is now a major Mediterranean city, even called the „co-capital“ (Greek: „συμπρωτεύουσα,“ symprotevousa) alongside Athens. Many historic sites are UNESCO World Heritage Sites. Thessaloniki was also named as the European Capital of Culture in 1997. It's a growing tourist spot, with investments in infrastructure such as the Metro project since 2006.

In conclusion, Thessaloniki's fascinating history and complex social fabric highlight its significance by linking the past and present, providing essential insights for future solutions. While this study presents a brief summary, it draws attention to further investigation into Thessaloniki's urban history, emphasizing the importance of preserving these assets for future generations facing new challenges.



Fig. 3.: Seaside view of Thessaloniki from today (own depiction, Widowsky, A. 2023)

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# More life in Vardaris

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## Abstract

This chapter analyzes the quality of public space in the case study of Vardaris, a district in Thessaloniki, Greece. Children are an important indicator of the quality of life and living conditions, which is why they are particularly taken into account in the analysis of public space (Daboline 2019).

The analysis of Vardaris shows that there are possibilities for improvement in the design of children's facilities such as schools and kindergartens to enhance the quality of living conditions. Drawing inspiration from the program „Mais Vida nos Morros“ (More life in the Hills) in Recife, Brazil.

In summary, this chapter discusses the comparison of challenges faced by Vardaris and Recife, introduces a public policy program focused on urban innovation and resilience with citizen participation, and proposes specific ideas for improving the Vardaris area, including colorful aesthetics and the creation of a green pathway.

## 1. Social Structure in Vardaris

According to the United Nations (UN), about 55% of the world's population lives in urban areas - and this number is expected to reach up to 70% by 2050 (Aristotele University 2023). Cities are places of culture and coexistence, of income and knowledge generation, of life and dreams. However, their growth brings ever greater challenges, such as the growing demand for adequate infrastructure. Public spaces in urban areas with insufficient infrastructure often discourage meetings, cultural events and exchanges between residents. (CDC Harvard University 2023). These circumstances demonstrate the need for the creation of public policies to address these challenges with urban interventions and social participation initiatives that transform the relationship of children and adults with urban spaces.

This chapter provides a socio-spatial analysis of Vardaris and proposes the creation of a public policy of urban intervention based on a good practice example in the city of Recife, Brazil. A Program called "Mais Vida nos Morros" (More life in the hills) that has been accumulating a series of national and international recognitions. It won the 2019 Alumni Meeting Award, promoted by the Science for Childhood Center, in recognition of its work on behalf of early childhood. It was also recognized as a national reference for innovation in public policies by The United Nations Human Settlements Programme (UN-Habitat), by the Dutch foundation Bernard van Leer, and by Child in The City, an independent institution whose main objective is to promote sustainable cities for children (SEIURB 2020: 41).

## 2. Analysis - Visibility, Characteristics and Typologies

This subchapter analyses Vardaris, a neighborhood in Thessaloniki, in terms of challenges, social structure, urban management, and community participation. This analysis was developed during an intensive summer school week (from 30.05.2023 to 03.06.2023) at the Aristotle University of Thessaloniki – AUTH (Faculty of Engineering School of Architecture). During the site visit on 30.05.23 the social infrastructure of the study area was identified and mapped (see Fig. 1). There, schools, kindergartens (purple), social housing (orange), sports facilities (blue), associations (red), playgrounds/parks (green) were identified. In order to visualize the social dimension and the environment in Vardaris, the map shows photos for buildings with mixed uses (dark blue).

### **Schools, kindergartens (purple)**

When looking at the map created (see Fig. 1), many facilities such as schools

and kindergartens can be identified. This was surprising because no children were seen in the afternoons after school hours during the walk-throughs of the area. Quoting the Italian pedagogue Francesco Tonucci, „Children are like fireflies in the city“, sensitive to unfavorable environmental conditions (Recife 2020). In 1996, the Child Friendly Cities Initiative (CFCI) was launched by UNICEF and UN-Habitat to adhere to the resolutions of the second United Nations Conference on Human Settlements (Habitat II).



Fig. 1: Map of the study area with social infrastructure facilities. (OWN ILLUSTRATION on the basis of OPENSTREETMAP, 2023)

The well-being of children is established as the ultimate indicator for a healthy living environment, a democratic society, and good governance. Urban planning, design, and management decisions have significant impacts on child development, especially considering new stressors like urbanization and climate change. City planning holds the responsibility for a healthy and positive future for our children, thus, for the entire society as well. As Bogotá's mayor, Enrique Peñalosa, stated „a city that is good for children is good for everyone.“ A child-friendly city is a sustainable, prosperous, and healthy city – one with high quality of life for all (Dabonline 2019). The implementation of quality public spaces in urban centers can strengthen the sense of collectivity and ensure healthy spaces for child development, especially for children in early childhood (0 to 6 years old) (CDC 2023). In Thessaloniki 41% of the population age is between 0 - 34 years (Municipality of Thessaloniki 2011). When looking at the playgrounds, it is noticeable that there are locked playgrounds in Vardaris. During the analysis, it was questioned whether a fenced playground promotes the quality of stay and the feeling of safety if fences are contrary to this. There are the fol-

lowing advantages and disadvantages for fencing playgrounds:

Advantages:

- safety from traffic, dogs, intruders
- privacy
- easier to lock off in the event of a defect (Park and Play design n.d)

Disadvantages:

- only one escape route in case of emergency
- playground feels less approachable
- playground seems less vulnerable, so parents are less likely to keep an eye on their children (Playgroundguardian n.d)

After this research on fenced playgrounds, it became clear that this measure makes perfect sense. However, one suggested solution would be that these fences could be lower in order to make the quality of stay in the neighbourhood more friendly. More detailed solutions are proposed in chapter 3 “Solutions and Measures for more life in Vardaris”.

### Fenced playground in Vardaris



Fig. 2: Fenced Playground in Vardaris (Own depiction)

### Proposition for a fenced playground



Fig. 3: Proposition for a fenced playground (Own depiction)

In summary, it becomes clear that the lack of quality in public spaces is one crucial aspect that needs attention in the study area. These spaces play a pivotal role in promoting social interaction, cultural expression, and community cohesion. Inadequate public spaces discourage residents from gathering, engaging in cultural activities, and exchanging ideas. Additionally, the authors suspect, that this hinders the development of a collective identity and impedes healthy spaces for child development, especially for children in their early years.

### **Social housing (orange)**

As a further aspect of analysis, the authors looked at social housing. They are located on the eastern edge of the study area and are one of the tallest buildings in the area. Apart from their height, they do not differ from the non-social housing and fit well into the surrounding landscape. They also have good accessibility to green spaces and schools.

### **Sport facilities (blue)**

There is one sports facility in Vardaris, which is a skate park. The authors find this positive because it is an offer for older children and young people. Nevertheless, the sports offer in Vardaris could be expanded. For example, basketball or football fields could be added. It is desirable if there are as many (sports) facilities for young people in the neighbourhood as there are playgrounds for small children. Of course, adults can also use and benefit from these other sport facilities.

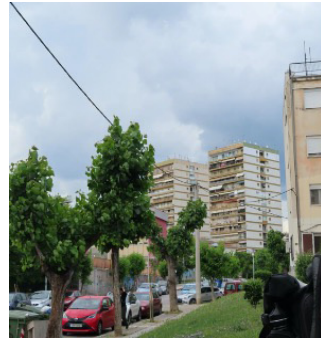


Fig. 4.: Social housing in Vardaris (own depiction)

### **Associations (red)**

Another example of the social profile of the neighborhood that was presented during the on-site visit, was the existence of the “Self-Help Association” indicated in red on the map (see Fig. 1). The “Self-Help Association” is a social program founded in 2001 in Thessaloniki, financed by the Greek Ministry of Health and implemented by the Department of Psychology of Aristotle University of Thessaloniki operating with the cooperation of OKANA - Organization Against Drugs (Aristotle University of Thessaloniki - Department of Psychology 2023), attempts to support and promote self-help/mutual aid philosophy in addressing addiction and other psychosocial problems, as well as health problems by reintegrating individuals into society through art projects, learning professions, etc. The interview with two staff members from the Self-help association confirmed the impression of the analysis that Vardaris, like many urban areas, is struggling with problems related to inadequate infrastructure and the need to foster a sense of community and collective involvement. When looking at the map, it is also noticeable that social housing (orange) accounts for a higher proportion than in the rest of Thessaloniki. In total, there are 4% social housing units in the whole city (Municipality of Thessaloniki 2022).

## **3. Unveiling Strategies and Actions for Enhanced Quality of Life**

Based on the analysis results, it is concluded that the topic “Citizen Engagement” would be the most appropriate focus for an intervention proposal. Accord-

ding to the Institute of Development Studies:

“Citizen engagement is a form of interaction between citizens and their governments. It can happen at any stage of the development or implementation of government policy and the delivery of public services, or be triggered by events in local areas. It can lead to a range of outcomes, including more effective services and more responsive and accountable states.” (Institute of Development Studies n.d.).

Therefore, a successful good practice from the city of Recife in Brazil was used as a comparative to the study area. First, the case study will be briefly introduced, followed by the intervention proposal for the study area.

### 3.1 The good practice - Program: Mais Vida nos Morros - Recife, Brazil

Created in 2016, “Mais vida nos Morros” (More Life in the Hills) is a public policy program of urban innovation and resilience that reinvents the city and fights socio-spatial inequality by promoting sustainable development, citizen involvement, and the creation of an urban space for children in the 545 communities of social interest in Recife, Brazil (SEIURB 2020: 5), as an example, they use vacant spaces to build playgrounds and other gathering areas.

By October 2020, the program had already served 53 social interest communities, directly benefiting more than 54 thousand inhabitants (SEIURB 2020: 6). To host „Mais Vida nos Morros“ and to stimulate other public policies that provide innovative solutions to urban problems, the city of Recife created a subdivision called „Executive Secretariat for Urban Innovation“ as part of the municipal Secretariat for Infrastructure and Urban Services (SEIURB 2020: 7).

To understand the municipality’s motivation for working on this kind of policy, it is important to acknowledge that in the city of Recife, around 500,000 people, equivalent to a third of the city’s population, live in these areas of social interest, which make up more than 60% of its territory. Most of the urban structures in these areas were formed spontaneously and in a disorderly manner. In addition to this, the lack of quality public spaces discourages meetings, cultural events and exchanges between residents to strengthen a sense of collectivity and guarantee healthy spaces for children’s development, especially for children in early childhood (aged 0 to 6) (SEIURB 2020: 7).

According to the Center on the Developing Child at Harvard University, the more adversities a child faces in the first three years of life, the greater the

chances of delayed development. The effect is cumulative. Children exposed to six or seven risk factors, such as poverty or abuse, have a 90% to 100% chance of experiencing one or more delays in their cognitive, language, or emotional development (FAO 2019: 19-30). Evidence like this was fundamental for “Mais Vida nos Morros” to focus on designing child-friendly public spaces for early childhood (0 to 6 years old).

Basically, the implementation of the program consists of 3 phases: Citizen Engagement, action and celebration. In the first phase (Citizen Engagement), the territory analysis and plan the actions are made together with the community through co-creation workshops. In the second phase (action), the intervention works are executed in cooperation between the technical responsables of the municipality, the volunteers from the community and an external sponsor (for example, a building materials company). In the third phase, a big celebration is held to announce the transformation of the place (SEIURB 2020: 38)

With the support of the Bernard van Leer Foundation, children have been brought to the main focus of the program. In both theory and practice, children are invited to contribute their ideas and imagination during the co-creation workshops that take place during the planning phase. And then they are also welcome to participate during the action phase, helping the adults to plant flowers or playing at painting the streets of the community (SEIURB 2020: 9).

After the implementation of the new urban spaces that invite the children to play near or in front of their houses, the family starts to accompany them. The Executive Secretariat for Urban Innovation of Recife, Brazil, states that prioritizing the creation of quality urban spaces for children is a strategy to improve community coexistence and a reverse strategy for public safety (SEIURB 2020: 13).

In conclusion, improvements indicators can be already identified in surveys carried out in the communities of Recife. In the community of Burity - Recife, for example, the number of children who use the public space as an area to play increased by 64.3 percent. It went from 11.4% to 75.7%, after the interventions, in 2019 (SEIURB 2020: 12).

### 3.2 Creating more life for Vardaris:

Comparing the study area in Vardaris with the case study in Recife is possible to identify similarities between the challenges faced by the two places. Two notable challenges were socio-spatial inequality and the low number of children playing on the streets. The socio-spatial inequality mentioned here refers to the



uneven distribution of resources, opportunities, and services within a geographic area (Kühn 2015: 368). In the context of Thessaloniki (Vardaris) and Recife (Communities of social interest), it implies that certain parts of these places might have better access to education, healthcare, and economic opportunities, while other areas experience relative deprivation. The low number of children playing on the streets suggests that in both Vardaris and Recife, there might be a lack of outdoor playgrounds and recreational activities for children. This might be due to various reasons such as safety concerns, lack of suitable spaces, or changing social dynamics.

Therefore, the public policy program of urban innovation and resilience through citizen participation in the case study in Recife presented positive results. In this context, the Program “Mais vida nos morros” (More life in the hills) aimed to introduce new ideas, processes, and strategies to improve the quality of life and address challenges in urban areas in Recife. Furthermore, it is realized by involving the local residents in the decision-making processes related to urban development and bringing the children to the main focus by involving them in the whole process. Engaging citizens, of all ages, can lead to more inclusive and effective solutions since they understand their own needs and concerns better than external entities (Huttunen et al 2022: 8).

The intent of this subchapter is to inspire stakeholders in Vardaris to consider implementing a similar public policy program, highlighting the given example. The urban design proposal for Vardaris consists of two main components: Colorful House Walls and Playgrounds as well as a green axis (See Fig. 5).

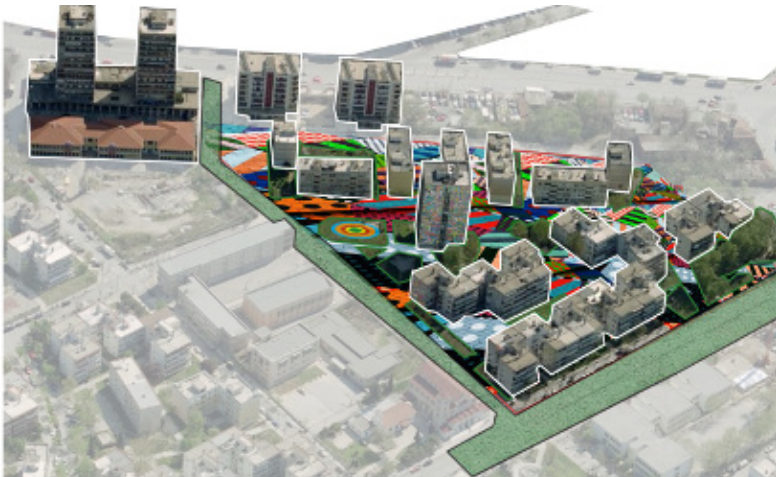


Fig.5 : Proposed Intervention area in Vardaris, Thessaloniki (own illustration on the basis of Triantis 2023)



The suggestion would be to paint the walls of houses and playgrounds in vibrant and appealing colors. This can have multiple benefits, including making the area visually attractive, fostering a sense of community pride, and potentially making the environment more inviting for children and families.

In addition, creating a linear pathway or corridor with greenery leading from the main train station into the Vardaris neighborhood. The intention is to establish an inviting and visually appealing connection that could attract visitors to explore the area. Green spaces can have positive effects on mental well-being, and an appealing pathway might encourage people to spend more time outdoors (Wood et al 2017: 65).

To transform the urban environment of Vardaris through the implementation of a public policy program inspired by the example of Recife, the suggestion is the implementation of it in four phases: Program Creation and Funding, Citizen Engagement, Transformation and Celebration.

To create the program, the municipality should take the lead in establishing a comprehensive program aimed at improving the designated area. In this phase the municipality explores potential sources of funding or seeks private partners or investors to support the initiative. The focus area for this program is selected; for instance, let's consider the neighborhood of Vardaris (SEIURB 2020: 18).

In the Citizen Engagement phase the municipality initiates communication with the residents, of all ages, of the chosen neighborhood (Vardaris). They inform the community about the program's objectives, benefits, and the upcoming engagement process. This step ensures that residents are well-informed and prepared for their active involvement. After the communication, workshops are organized to encourage residents, including both adults and children, to actively participate in shaping the transformation of their neighborhood. During these workshops, attendees share their ideas, suggestions, and contributions. These could involve a variety of initiatives such as revitalizing a plaza, establishing a community garden, removing waste collection points, creating a new playground, etc. (SEIURB 2020: 19).

In sequence, a plan should be developed for the day(s) of transformation. This includes identifying the volunteers who will be participating, determining the necessary preparations that need to be completed beforehand (such as repairs or safety measures), and ensuring all resources are in place. Then the community comes together on the designated day(s) to actively engage in transformation activities. This can include tasks like painting buildings and streets to add vi-

brancy, cleaning up the area to enhance cleanliness, and planting greenery to improve aesthetics and environmental quality (SEIURB 2020: 22).

Following the successful completion of the transformation efforts, a celebration event is organized within the community. This event serves as a moment of joy and pride, highlighting the collective achievements of the residents. It acknowledges their hard work and dedication in making their neighborhood a better place to live. The celebration event fosters a sense of unity and accomplishment among community members (SEIURB 2020: 24).

In summary, this four-phase approach outlines a systematic process for community-driven urban improvement:

- 1. Program Creation and Funding:** The municipality establishes the program and seeks financial support.
- 2. Engagement:** Residents are informed, engaged, and contribute ideas through co-creation workshops.
- 3. Transformation:** Planning and execution of transformation actions, with active participation from volunteers.
- 4. Celebration:** An event is held to celebrate the achievements and efforts of the community.

Through this process, the neighborhood could experience positive changes, enhanced community spirit, and improved quality of life, while fostering a sense of ownership and pride among the residents.

#### 4. Conclusion

In conclusion, this chapter underscores the critical necessity for the formulation of public policies that tackle not only the structural and managerial aspects of urban areas like Vardaris but also emphasize community involvement. By effectively executing proven models of urban intervention and nurturing active citizen participation, the potential emerges to craft urban spaces that are not only more dynamic and all-encompassing but notably advantageous for the holistic development of children and the overall welfare of the community.

The challenges linked to social structure, urban management, and participation within the context of Vardaris, Thessaloniki, demand a comprehensive and collaborative approach. Drawing inspiration from successful models, such as the „Mais Vida nos Morros“ program, and tailoring interventions to align with the neighborhood’s distinct requirements can be highly effective. As a result, the program can engender a transformation that directly benefits children.

By revitalizing public spaces, creating safer environments, and encouraging community engagement, the program facilitates a shift towards more child-friendly settings. Colorful and lively public spaces, such as renovated plazas and vibrant playgrounds, offer inviting areas for children to explore, interact, and engage in recreational activities. Cleaner and greener surroundings created through volunteer efforts can instill a sense of pride and ownership among children, promoting positive behaviors and attitudes toward their environment. Furthermore, the program's participatory nature allows children and their families to actively contribute ideas, ensuring that their needs and preferences are considered in the planning and execution of urban improvements. This inclusive approach empowers children to have a voice in shaping their surroundings, fostering a sense of belonging and community integration from an early age.

In essence, the program's multi-phased strategy not only addresses structural and managerial challenges but also places children at the forefront of urban transformation. Through targeted interventions, active community engagement, and the cultivation of child-friendly spaces, the program endeavors to create an environment that supports the wholesome growth and well-being of children, while simultaneously enhancing the overall vitality of the community in Vardaris, Thessaloniki.

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# EquiCity: Creating a Livable Future for All

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## Abstract

This analysis delves into the economic and housing situation in Thessaloniki, particularly focusing on the Vardaris and Xyrokrini districts. It discusses the relationship between urban development, economic resources, and resident housing. The article mentions the role of private investors in shaping gentrification processes and advocates for a balance between economic growth and preserving the neighborhood's character. Thessaloniki's economic landscape, driven by tourism, port activities, industry, and education, sets the backdrop for the discussion. The Vardaris and Xyrokrini districts, despite their central location, face economic challenges, manifested in dilapidated infrastructure and high unemployment rates. The potential of upcoming urban developments, including the metro system and growing tourism, presents opportunities for revitalization. The housing fabric in Thessaloniki, characterized by Polykatoikia structures, is contrasted with the more organized social housing in the mentioned districts. The article highlights the need for interventions to enhance living conditions, such as improving security and regulating Airbnb usage. Finally, the study proposes regulations to strike a balance between economic growth and housing affordability while fostering a sustainable future for these neighborhoods.

## 1. Introduction

On one hand urban development is often significantly influenced by the residents in modern times as participation becomes more and more important. On the other hand, financial resources also often play a key role as urban development is connected with high financial investments. However, it should be noted that external private investors can be decisive for gentrification processes, as they are often profit-oriented. Accordingly, strengthening the local economic situation is necessary in order to achieve a healthy balance between the local population and the local economy to preserve the character of the neighbourhood. In the following, the economic and housing situation in Thessaloniki and Vardaris and Xyrokini will be examined in more detail to give an understanding about the current situation and development options.

### **General overview of the economic situation in Thessaloniki**

The main sources of income in the city of Thessaloniki is tourism. More than 2 million people arrive each year to visit and vitalize the city. Therefore, it is the biggest source of employment in the area. Another important sector in the economy is the cargo port. The second largest harbour in Greece serves as an export and transit hub to the Black Sea and the Balkans. Additionally, Thessaloniki's traditional industry consists mostly of oil, steel, petrochemicals, textiles and cement fabrics. Furthermore, the university is another essential part for the economy of the city as it attracts annually more than 150.000 students in total, which in sum makes up for a significant economic factor (European Commission, 2022).

Despite the economic importance of Thessaloniki for Greece, its unemployment rate is still relatively high with around 30% according to the local workers union. Especially, young people are thereby in a volatile situation, even though the employment rate increased strongly over the years, in comparison to the situation after the financial depression in 2010, when unemployment reached an all time high (ELSTAT Hellenic Statistic Authority A, 2023, 1-3).

### **A Zoom into Vardaris and Xyrokini**

However, in Vardaris and Xyrokini, the district near the Central-Railway-Station of Thessaloniki, the situation is even worse. Formerly, the area was known for its tobacco plant (see Fig. 1) and producing textiles. Nowadays, the productive activities in the district are mostly services such as reparations and maintenance of cars, the storage of different goods due to the location near the central railway station and the commercial street sellers at the „American Market“, which are specialized in low cost military clothing and outdoor equipment near the



junction of the Odisseos and Egnatia road (see Fig. 2).

Overall, as mentioned before the economic situation in Vardaris and Xirokini is grave. The area is known as one of the more deprived districts in Thessaloniki, even though it has a central location and good access to the public transport. Roads and Houses are often in a battered condition (see Fig. 2) and vacancies are visible throughout the whole area. In the coming years this situation might change, because of the implementation of the new metro system and the growing urban tourism, because the district actually has potential due to its location and good connections to the rest of the city. (Gavanas et al., 2012, 100).

However, there are also opportunities outside of tourism for the district to improve its economic situation. In the vacant buildings, for example, co-working spaces are an invigorating option. If in commission the new metro line and the adjacent train station would make the neighbourhood more accessible and create a fast gateway to the university, which would be then reachable in 10 minutes. In addition, the high density of car repair shops can also offer a new opportunity. In the form of a flea market for mechanical components, surplus or needed parts could be sold or purchased here from the workshops in the immediate vicinity. In combination, workshops with various crafting



Fig. 1: Mural of the old tobacco factory in Odisseos road (Jelle Schacht 2023)



Fig. 2: Analysis of the current economy in Vardaris and Xyrokini (Georgia Goussiou 2023 own Illustration)



Fig. 3: Severe street damage on the Vakchou road (JELLE SCHACHT, 2023)

could also be offered. With all these measures, the current character of the neighbourhood could be taken up. At the same time, an attraction would be created that has the potential to attract tourists to explore the neighbourhood on foot. Therefore, more income could be generated from which the existing businesses could benefit, but also options for new, previously underrepresented businesses such as cafes, bars or bistros.

## 2. Housing in Thessaloniki

The Cityscape in Thessaloniki is for the most parts characterized by the Polykatoikia, which is simply the Greek term for an apartment house. First developed in the 1920s the Polykatoikia was implemented as a solution for the housing shortage. Due to its prefabricated elements, a fixed core of staircase, an elevator shaft and a concrete skeleton (see Fig. 3), it is a fast constructed building type which reshaped most of the Greek cities and still dominates the modern cityscape (Laboratory for integrative architecture, n.d.). The maximum eaves height is thereby fixed to 120 % of the street width. Consequently, the Polykatoikia results always in a covered walkway, which is open to the street. Additionally, the buildings are usually oriented outwards with their balconies and verandas to give the residents more open space (Uuurble 2020). Furthermore, the ground floor is designated to businesses or shops to enable a multi-functionality inside the buildings and also give space for pedestrians to walk. The result is a wide range of flexible uses, which means that when the building is being constructed, it can still be completely open as to which type of use will move in when the building is completed (Laboratory for integrative architecture, n.d.). They cover the vast majority of the housing buildings in Greece and are not only in Thessaloniki the defining feature of the cityscape. As a result, Thessaloniki is also very densely built and has a population density per square kilometre of 16.526,8 (ELSTAT Hellenic Statistic Authority B, 2023: 15).

Opposite to most of Thessaloniki, the building types in Vardaris and Xyrokriini have more varieties. Most of the area was designed as government subsidised social housing in form of four-storey buildings without shops at the ground level. This is something special for Thessaloniki as there are only two bigger planned areas in the whole city for social housing (see Fig. 4) The buildings all have the same outline, because the whole area was planned by the government and no private investors were included.

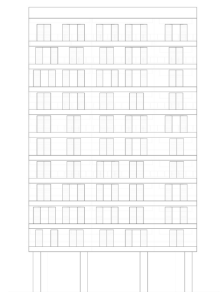


Fig. 3: Classic design of a Polykatoikia (Own Illustration, Gorgia Goussiou 2023)

Consequently, the social housing area looks more organized from above, than the rest of the city. In this case, the green spaces surrounding the apartment buildings were also designed, whereas many other green spaces in housing districts were not planned in advance in Thessaloniki. Accordingly, there are comparatively many green areas and places to stay around between the buildings. However due to the low income area, the houses are mostly in a relatively bad shape and in dire need of renovation as there seems to be a serious backlog. Most of the buildings date back to the 1960s and at least look as if hardly any construction work has been done since then (see Fig. 5).



Fig. 4: Social Housing Thessaloniki (Own Illustration, Gorgia Goussiou 2023)

In addition, the lower floors are often heavily fortified from the outside, which could indicate a lack of a sense of security. In order to improve living conditions, more streetlights could be installed, as they increase the perceived feeling of safety and also statistically reduce crime due to the improved visibility (Herbert and Davidson 1994: 10-12).

One speciality in the area are the two twelve-storey towers at the junction of Geor. Ivanof road and the Nik. Kapatou road, they can be seen from far away and serve as a landmark for the district. They were developed as social housing,



Fig. 5: Housing and open space in Vardaris and Xirokini with the two towers in the background (Jelle Schacht 2023)

but the ground floor is used for public institutions and the apartments are built on top of it. In the northern part Vardaris and Xirokini there are two more smaller towers, but there the ground level is used only as a parking lot. They are worth mentioning as there are hardly any buildings in Thessaloniki taller than the average Polykatiokia.

However, already today the pressure on the local residents is increasing, as the rents are going up and more and more living room is converted into Airbnb's for tourists, which creates new tensions, as the locals are forced to move out due to gentrification. To enable a sustainable growth, which is not at the expense of the local population, it is therefore necessary for the government to establish a framework for development. According to a study by the Hellenic Chamber of Hotels regulations could be implemented as following (The Greece reporter 2022).

- Private investors should only be allowed to own up to two apartments.
- The percentage of Airbnb's inside of one district is capped at 30% to maintain the former district life.
- A certain percentage ( $\approx 2\%$ ) of the profit from the Airbnb's should go to straight to the neighbourhood to fund NGO's and social activities inside the quarter.
- A limit of operations to 90 days per year

There might be the risk that such harsh regulations could also scare away potential investors. It is therefore important to find a healthy middle ground that satisfies both local residents and investors. The city, as the developer at the time, therefore has a special responsibility to protect the vulnerable population and preserve their housing and create a good ground work for new business opportunities, but also to significantly improve the living conditions of the resident that prevail at the moment.

The economic situation of the neighbourhood is decisive for the composition of the residents. In the case of Vardaris and Xirokini, the local opportunities are limited at the moment, which is also the reason for the many vacancies. Accordingly, job conditions must be created locally, and if jobs are available, it is likely that the opportunity to live in the immediate vicinity of the job will also be taken up, especially since the geographical location, as already mentioned, is actually one of the strengths of the neighbourhood.

## Conclusion

In simple terms, Thessaloniki faces problems with jobs and housing. Some parts, like Vardaris and Xyrokriini, don't have many job opportunities, which has led to poor living conditions and empty buildings. But there's hope for improvement.

New things like a subway system and the central location of these areas could make them better. For example, turning some empty buildings into places where people can work or sell things could create jobs and bring more life to the neighborhoods.

Housing is also a big concern. Rules could be made to limit how much Airbnb is used and to make sure investors don't buy too many houses. Some of the money from Airbnb could also be used to help the neighborhood. These rules should balance the needs of local people and investors.

In short, making these neighborhoods better means creating jobs, improving housing, and finding ways for people and investors to both benefit. Thessaloniki can have a brighter future by working together to make these changes happen.

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# Exploring Thessaloniki: The Evolution and Impact of Urban Public Spaces and Green Areas

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## Abstract

Thessaloniki, a bustling and lively city, faces the challenge of limited public and green spaces amidst its dense urban fabric. Compared to European standards, Thessaloniki has one of the lowest ratios of green space per resident, with only 2.6 m<sup>2</sup> per inhabitant (Latinopoulos et al. 2016:132). On average, some 40 % of the surface area of European cities is made up of urban green infrastructure, with around 18.2 m<sup>2</sup> of publicly accessible green space per inhabitant; 44 % of Europe's urban population lives within 300 m of a public park (European Commission n.d). This suggests that prior policies and initiatives aimed at tackling this problem have faced significant hurdles and have not yet produced substantial outcomes (cf. Karagianni 2023). The scarcity of green spaces is further exacerbated by the city's high residential densities (COT 2017). These circumstances highlight the pressing need for effective interventions and strategies to enhance the availability and accessibility of public and green spaces in Thessaloniki. This text primarily focuses on the western part of Thessaloniki for the analysis of visibility, characteristics/typologies, impact on surroundings, challenges, and solutions & measures of green spaces. Therefore, this text gives an overview of the accessibility of green spaces; some are more hidden as they are small and not in prominent locations, whilst others are very visible due to their size and location. Further, different typologies of green spaces could be defined in the study area due to their different characteristics; these include squares & parks, pathway greenery, tree lines, school courtyards, sports areas, and open non-designed spaces. Each green space brings a potential to enhance its surroundings socially, environmentally, and economically. Finally, some solutions and measures are formulated to combat the challenges the green spaces of Thessaloniki face. By narrowing the scope to this specific area, we aim to gain a comprehensive understanding of the dynamics and issues related to public and green spaces in this particular region of the city.



## 1. Visibility

Public and green spaces in Thessaloniki vary in terms of their visibility within the city. Some spaces, such as Aristotle Square and the waterfront promenade, are highly visible and serve as iconic landmarks that attract both residents and visitors. These spaces contribute to the city's identity and serve as meeting points for social activities and events. On the other hand, there are hidden or under-utilised spaces that lack visibility and fail to draw people's attention. Enhancing the quality of these spaces is crucial to ensure their utilisation and integration into the urban fabric.



Fig. 1: „Setting the Grounds for the Green Infrastructure in the Metropolitan Areas of Athens and Thessaloniki: The Role of Green Space“ (Papageorgiou & Georgia 2018)

The western part of Thessaloniki stands out as an area with more green spaces, boasting a total of 55 parks (Karagianni 2023). Parts of this district (Vardaris & Xirokrini) have been developed in the concept of a Garden City, incorporating



planned development that prioritises the creation and preservation of green areas. In comparison to other districts of Thessaloniki, the western part, therefore, demonstrates a higher concentration of parks and green spaces, offering the potential to enrich the environmental landscape of the city.

## 2. Characteristics and Typologies

Thessaloniki boasts a diverse range of public and green spaces, each with its own unique characteristics. Parks, gardens, squares, plazas, and pedestrian streets are among the various typologies found throughout the city. These spaces offer opportunities for leisure, recreation, social interaction, and cultural activities. Additionally, Thessaloniki is known for its historical landmarks, such as the White Tower and the Rotunda, which serve as significant public spaces that showcase the city's rich heritage.

In the western part, Thessaloniki offers the following range of green and open spaces, each with its distinct characteristics and functions. These typologies include:

### 1. Squares & parks:

These designated areas serve as communal gathering spaces and recreational hubs for residents. Squares typically feature open plazas, often surrounded by buildings, while parks encompass larger areas with greenery, trees, and amenities such as benches, playgrounds, and walking paths.

### 2. Pathway greenery:

Along the streets, pathways and front gardens of the social housing district, Thessaloniki incorporates greenery, such as grass areas, sometimes flowerbeds, trees and shrubs, to enhance the visual appeal or provide sha-



Fig. 2: Square in Thessaloniki (own depiction)



Fig. 3: Pathway greenery in Thessaloniki (own depiction)

de. These green corridors have the potential to contribute to the aesthetics of the cityscape while offering a pleasant pedestrian experience.

### 3. Tree lines:

Thessaloniki embraces the concept of tree-lined streets, where trees are planted along the sidewalks or medians. These linear green spaces not only contribute to the city's aesthetics but also provide shade, they can reduce the heat island effects, and improve air quality.

### 4. School courtyards:

Within educational institutions, school courtyards serve as semi-private green spaces for students. These areas offer opportunities for outdoor activities, relaxation, and social interaction, fostering a healthier and more engaging learning environment. In Thessaloniki these places are always fenced, often by tall walls, not allowing any social interaction or opening of those places to the public.

### 5. Sports areas:

These sports areas can include playgrounds, sports fields, and courts, catering to various sports such as football, basketball, tennis, and more. Most of these spaces are enclosed by fences or walls, often featuring only a single entrance, creating a separation from the surrounding environment.



Fig. 4: Tree lines in Thessaloniki (own depiction)



Fig. 5: School courtyard in Thessaloniki (own depiction)



Fig. 6: Sports areas in Thessaloniki (own depiction)



Fig. 7: Open non-designed spaces in Thessaloniki (own depiction)

### **6. Open non-designed spaces:**

In addition to intentionally designed green spaces, Thessaloniki also encompasses open non-designed spaces. These areas may arise naturally or as a result of urban voids or vacant lots. While not specifically planned or landscaped, they often appear as places for wildness or are used informally as car parks.

## **3. Impact on Surroundings and Potentials of green spaces**

Public and green spaces have a profound potential to have positive impacts on their surroundings. Well-designed and well-maintained spaces contribute to the quality of life, aesthetics, and overall liveability of neighbourhoods. However, neglected or poorly maintained spaces may have the opposite effect, contributing to the deterioration of the urban environment and hindering community well-being.

Public and green spaces therefore have significant social, economic, and environmental impacts on their surroundings (cf. Aldous 2006, LHH 2020; Voigt et al. 2014; Gehl 2010).

### **Social Impact:**

Promoting a Flourishing Community: Public and green spaces play multifaceted roles in enhancing community life. They serve as gathering spots, fostering social interaction, community engagement, and a shared sense of belonging, while also offering opportunities for individuals from diverse backgrounds to connect and establish social ties. Simultaneously, these spaces promote physical well-being by encouraging outdoor activities, leisure, and recreation, leading to improved physical and mental health. The relaxation and stress reduction afforded by these spaces contributes to an overall better quality of life. Moreover, they contribute to social equity by ensuring that well-designed and accessible areas are available to all members of the community, thereby mitigating social inequalities and promoting inclusivity (cf. Gehl 2010, Ward Thompson 2011, Aldous 2006).

### **Economic Impact:**

- **Property Values:** Proximity to well-maintained public and green spaces can enhance property values and attract businesses and investments. These spaces contribute to the aesthetic appeal of neighbourhoods, making them desirable places to live, work, and visit.
- **Tourism and Recreation:** Public and green spaces, especially those with unique features or attractions, can become major tourist destinations, attracting visitors and generating economic activity. They provide opportunities for outdoor events, festivals, and recreational activities that support local businesses and the tourism industry.
- **Economic Development:** Strategically planned and designed public and green spaces can stimulate economic development by creating job opportunities, attracting businesses, and revitalizing neighbourhoods. They can act as catalysts for urban regeneration and contribute to the economic growth of a city or region. (cf. Aldous 2006)

### **Environmental Impact:**

- **Biodiversity and Ecological Balance:** Green spaces provide habitats for flora and fauna, promoting biodiversity and supporting ecological balance. They contribute to the preservation of natural ecosystems, protect wildlife, and mitigate the impacts of urbanization on the environment.
- **Climate Resilience:** Vegetated areas within public and green spaces help mitigate the urban heat island effect, reduce air pollution, and improve air quality. They also play a role in managing stormwater runoff, reducing the risk of flooding, and enhancing the overall resilience of urban areas to climate change.
- **Environmental Education:** Public and green spaces offer opportunities for environmental education and awareness. They can serve as outdoor classrooms, promoting ecological literacy and sustainable practices among community members, especially children and youth. (cf. Aldous 2006)

## **Challenges**

Thessaloniki faces several challenges concerning its public and green spaces. Limited availability of land, particularly in densely populated areas, poses a challenge to creating new spaces or expanding existing ones. The need to balance the preservation of historical heritage with the creation of modern, functional spaces is another challenge. Additionally, ensuring accessibility and inclusivity for all citizens, regardless of age, mobility, or socioeconomic background, is essential but often challenging. The lack of funding and resources for the maintenance and improvement of public spaces is also a common challenge faced

by the city.

The west of Thessaloniki faces various challenges in relation to its public and green spaces. These challenges include:

- **Limited Public and Green Spaces:** The area suffers from a lack of adequate public and green spaces. The available spaces are limited in size and quantity, failing to meet the needs of the growing population.
- **Informal Urban Development:** Informal urban development is prevalent, with open spaces being used for unauthorized construction or converted into parking areas. This encroachment on open spaces compromises their original purpose and limits their availability to the public.
- **Water Management:** The city's water management is a significant challenge, particularly during heavy rainfall when the city transforms into a river. This issue is exacerbated by the excessive use of hard materials in urban infrastructure, including the insufficient incorporation of organic elements even within parks. Inadequate water management infrastructure leads to flooding and hampers the functionality and usability of public and green spaces.
- **Lack of Design for People:** Thessaloniki's urban design prioritizes automobiles over pedestrians, neglecting the needs and comfort of people. The cityscape lacks pedestrian-friendly features, such as walkways, seating areas, and shade, making it less inviting for individuals to utilize and enjoy public and green spaces.
- **Inadequate Consideration for Disabled People:** The social infrastructure of public and green spaces does not adequately cater to the needs of disabled individuals. Insufficient accessibility features, such as ramps, handrails, and designated seating areas, restrict the participation and enjoyment of these spaces by disabled residents and visitors.
- **Fences and Separation:** The presence of fences in public and green spaces contributes to a sense of separation and exclusion. These physical barriers restrict access and create a perception that these spaces are not fully open to the public, undermining their inclusive nature.
- **Lack of Natural Elements:** A notable issue is the prevalence of artificial greenery and a lack of organic materials. Concrete dominates many areas, resulting in a „fake green“ environment that lacks the beneficial qualities and aesthetic appeal of natural vegetation.



- **Lack of Maintenance:** Public and green spaces suffer from a lack of proper maintenance and upkeep. Insufficient resources and attention to regular maintenance activities lead to deterioration, making these spaces less attractive, functional, and safe for users.
- **Quality of Edges:** The edges of open and public spaces often lack attention and consideration in terms of design and functionality. These edges are frequently overlooked and underutilized, despite their potential to enhance the overall experience and usability of the spaces.

#### 4. Solutions & Measures

Addressing these challenges requires concerted efforts from urban planners, policymakers, and the community (Smith et al. 2020). It entails prioritising the expansion and improvement of public and green spaces, ensuring proper water management infrastructure, adopting inclusive and people-centred design principles, removing physical barriers, incorporating more natural elements, allocating sufficient resources for maintenance, and maximising the potential of the edges of these spaces (Jones & Brown 2019). By addressing these challenges, Thessaloniki can create more vibrant, accessible, and sustainable public and green spaces that enhance the well-being and quality of life for its residents.

##### **Solutions and measures should include:**

1. **Urban Planning:** Integrating the creation and improvement of public and green spaces into urban planning strategies, considering factors such as population density, land availability, and accessibility (Johnson et al. 2021).
2. **Community Engagement:** Involving the community in the design, planning, and maintenance of public spaces, fostering a sense of ownership and pride among residents (Miller & Smith 2018).
3. **Multi-functional Design:** Designing spaces that serve multiple purposes, such as incorporating green infrastructure, seating areas, playgrounds, and spaces for cultural events, to maximize their usability and appeal (Garcia et al. 2017).
4. **Preservation and Restoration:** Preserving historical landmarks and integrating them into the design of modern public spaces, creating a harmonious blend of heritage and contemporary elements (Clark & White 2016).
5. **Maintenance and Management:** Establishing effective maintenance and management systems to ensure the cleanliness, safety, and attractiveness of public spaces, involving both public and private stakeholders (Adams & Taylor 2019).
6. **Sustainable Practices:** Implementing sustainable practices in the design and

maintenance of public spaces, such as using native plants, promoting water efficiency, and incorporating renewable energy sources (Green et al. 2020).  
Funding and Partnerships: Exploring diverse funding sources and establishing partnerships with private entities, community organizations, and NGOs to secure resources for the development and maintenance of public spaces (Johnson & Williams 2022).

In conclusion, creating and enhancing public spaces that meet the diverse needs and desires of urban residents requires a holistic approach that integrates urban planning, community engagement, multifunctional design, preservation, effective maintenance, sustainability, and collaborative funding strategies. These factors, when combined, can contribute to the development of vibrant and inclusive public spaces that enhance the quality of urban life.

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# Revitalising Public Spaces and Promoting Social Cohesion through a Sustainable Urban Design: Case Study in the Xirokrini-Vardaris Area of Thessaloniki

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Students

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## Abstract

This article presents a comprehensive site analysis of the Xirokrini-Vardaris area in Thessaloniki, identifying challenges such as isolation from an abandoned train station, car-centric dominance of parking, underutilised green spaces, and lack of vibrant social areas. To address these, the study team proposes sustainable interventions to transform the Xirokrini-Vardaris area into a vibrant and sustainable urban environment: enhancing social housing with vegetation green walls for microclimate regulation, privacy, security, and air purification. It emphasises redesigning green spaces to invite community interaction, prioritising pedestrian infrastructure, and fostering inclusivity through clear public-private delineation. These interventions aim to create a sustainable, vibrant, and inclusive urban environment, fostering social cohesion and pedestrian mobility. Thessaloniki can thus pave the way for resilient, people-centric urban development.

## 1. Introduction

A good city centre is the core of a lively and liveable urban area (Paumier, 2004). It needs a clear identity, a sense of place, and a variety of functions. Urban design, built environment, transportation and infrastructures shape its quality. Urban design arranges and presents buildings, streets, public spaces, and landmarks. The built environment provides shelter, services, and amenities. Transportation moves people and goods within and across the city centre. They should be reliable, adequate, adaptable, and integrated (McGranahan & Satterthwaite 2003).

Therefore, a centre of the future must be able to face various challenges including shifting shopping patterns, declining foot traffic, rising rents, and regulatory barriers, which have been further exacerbated by the Covid-19 pandemic. This article explores revitalisation strategies for the historic centre of Thessaloniki, focusing on adapting and thriving amidst changing urban dynamics.

Urban design can facilitate more integrated cityscapes and shape public space in cities that face social and political conflicts (Gaffikin et al., 2010). Madanipour (1999) shows how public space can foster social and functional integration, as well as place identity and consumption, but also how it can be threatened by segregation and privatisation.

This article focuses on the Xirokrini-Vardaris area in Thessaloniki, exploring how urban design can breathe new life into this historic part of the city. The aim is to find sustainable solutions that make the area livelier, connected, and people-friendly, setting an example for other cities to follow.

## 2. Prologe

Though it might not be globally renowned, Xirokrini holds distinctive characteristics that make it a compelling focal point of study. Thus, introducing this paper in the area alone presents a valuable opportunity to delve into a neighbourhood of significant importance and potential.

Among the several compelling reasons why one might choose to focus on this area, one must first and foremost highlight its geographical significance. Xirokrini's location could be a key factor for two reasons. First, this part of the city has always served as the main entrance to the historical centre of Thessaloniki. It would probably be interesting to explore how urban design and transportation networks have evolved while preserving their heritage. Second, its posi-

tion within the city and proximity to important landmarks, transportation hubs, and commercial districts might make it a critical junction for urban mobility and development. In addition, its contour-forming landscape deduces the environmental challenge of susceptibility to flooding, the treatment of which makes it an intriguing case study.

The potential role of Xirokrini as a transportation nexus is another reason to focus on this area. Xirokrini serves also as an internal distribution centre since both the New Train Station and the Intercity Bus Station are located nearby. So, by examining its infrastructure and connectivity, researchers can yield valuable insights into the challenges and opportunities associated with managing urban mobility effectively. Additionally, any distinct socio-economic, cultural, or environmental dynamics within the area could significantly influence urban design and infrastructure needs, enhancing the overall significance of the study.

Last but not least, the historical and architectural significance of the widespread area of Vardaris might shed light on the evolution of urban design and transportation networks over time while preserving heritage. As the area seems to be the main subject of local government initiatives and future development plans, investigating the impacts of these projects can provide a foundation for assessing their effectiveness and potential benefits. Ultimately, the study of Xirokrini Vardaris can contribute valuable insights to the broader discourse on urban sustainability, liveability, and effective strategies for addressing urban challenges.

### 3. Site Analysis

The study team arrived at the site of analysis on the 30th of May at the meeting point that was set at the New Train Station of Thessaloniki. The groups, accompanied by instructors and other participants of the workshop-summer school, conducted a site visit within the study area, making brief stops at regular intervals. During these pauses, they engaged in a comparative analysis of the environment before and after each halt, intending to develop a comprehensive understanding of the area. This exercise was guided by a critical commentary and reflective approach since revisiting the site would be a work against the scarce available study time. At the last stop, most of the time was devoted to an open discussion primarily centred around the easternmost section of the area, which, in comparison to the rest of the locale, is situated closer to the city centre and experiences greater vitality.

After analysing the site (see Fig. 1) based on storyboards (see Fig. 2), it was evident that the Xirokrini Vardaris area is currently experiencing, all in all, a state



Fig. 1: Site location, own illustration based on Google Maps

of recession and abandonment. Through interactions with residents, a common sentiment emerges wherein there is a profound attachment to their place of residence, coupled with a strong desire to witness its restoration to its former splendour. Notably, during interviews, one respondent aptly characterised the area as a „centre off-centre,“ underscoring its potential significance within the broader urban context. Regrettably, the lack of substantial efforts to ameliorate the residents' living conditions is evident, revealing a gap between the area's current state and its envisioned potential, as previously summarised.

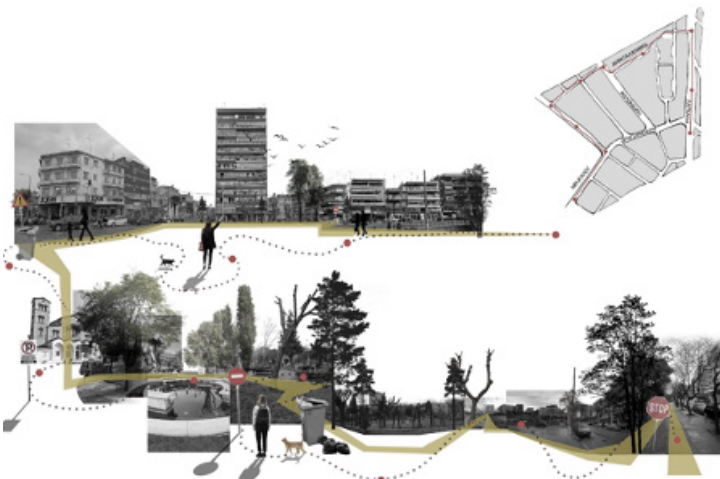


Fig. 2: Site location, own illustration based on Google Maps

## 4. Problems Identified

Having acquired a thorough knowledge of the whereabouts of the investigated area, the team compiles a list of issues identified during the recognition phase, aiming for a more effective resolution. Undoubtedly, these issues are numerous and challenging to entirely address within this brief time frame. Hence, their resolution will be undertaken within the framework of assessing prior proposals (i.e., those suggested in preceding studies) and complementing them with contemporary recommendations.

### 1. Disconnected and Isolated

To begin with, the train station in the area presents a distinct sense of abandonment and isolation. It lacks vibrancy and fails to serve as a hub for community interaction and mobility. Its neglected state contributes to a feeling of disconnection from the surrounding neighbourhood. Moreover, the sole presence of the train station creates a division, resulting in two distinct districts. The facade of the station facing Michail Kalou Street injects into the visual continuity of the urban fabric, hindering social cohesion and inhibiting the flow of people and activities between the areas. The perception of the district as a potential „ghetto“ due to the station’s proximity further exacerbates the sense of isolation.

### 2. The Dominance of Parking Spaces

The presence of numerous parking spaces and the prioritisation of cars over other modes of transportation dominate the site. This excessive allocation of space to parking inhibits the potential for vibrant and pedestrian-friendly urban spaces. It also perpetuates a car-centric mindset that prioritises convenience over sustainable mobility options. To create a more sustainable and people-oriented urban environment, there is a need to shift the focus from parking spaces to alternative modes of transportation. Encouraging walking, cycling (wherever it can be encouraged due to the land’s slope) and public transit should take precedence, to reduce the dependency on cars and improve the overall quality of the built environment.

### 4. Visibility and noise concerns

Although Lagada Street runs adjacent to the site, its visibility could be improved, resulting in a lack



Fig. 3: Low-quality green spaces (own depiction with illustration)



Fig. 4: Street parking (own depiction with illustration)

of integration with the surrounding urban fabric. The physical barriers obstruct the view, preventing the street from becoming visible and the noise pollution can have negative effects on human health such as anxiety and sleep disturbance. Efforts should be made to strike a balance between improving the visibility of Lagada Street (see Fig. 5) and mitigating noise concerns. Implementing design interventions that provide visual connections while effectively managing noise pollution can contribute to a more integrated and livable urban environment.

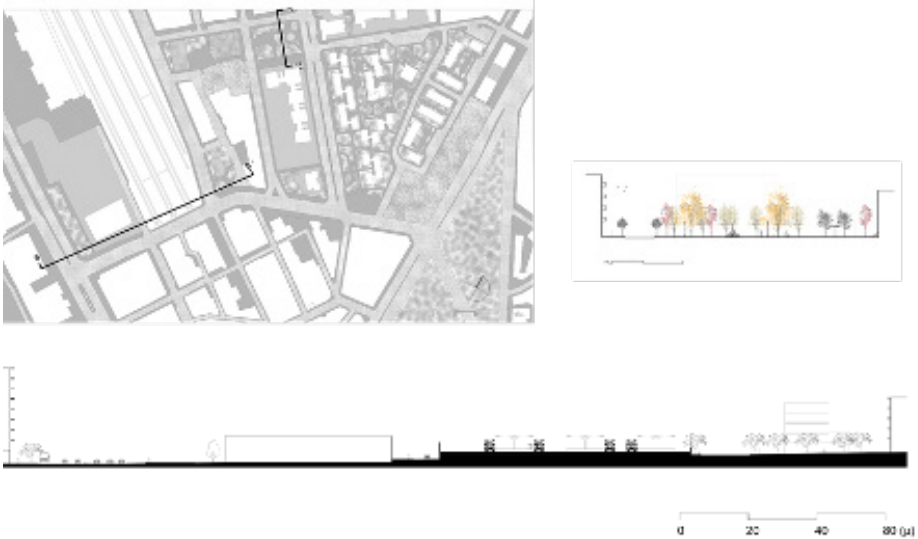


Fig. 5: Street sections (own drawing)

### 5. Lack of Vibrant social Spaces

The absence of vibrant street life is evident, with a dearth of cafes, restaurants, bars, and other social gathering spots. The lack of diverse and lively social spaces hampers community interaction, diminishes opportunities for leisure activities, and inhibits the overall vitality of the area. Creating an inviting and inclusive streetscape is essential for revitalising the area. Encouraging the development of vibrant street-level activities, fostering the establishment of cafes, restaurants, and other amenities, and organising community events can stimulate social interaction and enhance the overall quality of life for residents.

### 6. Dilapidated Structures

Many buildings in the area exhibit signs of deterioration and require renovation. Their worn-out facades and outdated appearances contribute to a sense of neglect and disinvestment in the urban fabric. Addressing these issues is crucial to rejuvenate the area and enhance its visual appeal. Investing in the reno-





Fig. 6: Sidewalk accompanying parking space (own depiction with illustration)



Fig. 7: Space that can be utilised (own depiction with illustration)



Fig. 8: Conflict between pedestrian and parking space (own depiction with illustration)

vation and restoration of buildings can significantly improve the overall aesthetic quality of the area. This includes repairing facades, refreshing building colours, and implementing green renovation practices to promote sustainability.

## 7. Empty Spaces and Potential

The presence of empty spaces waiting for development offers an opportunity for optimal land use planning. These vacant areas can be transformed into vibrant public spaces, mixed-use developments, or green corridors, maximising the potential of the site, and enhancing its functionality (see Fig. 7). To ensure a cohesive and well-designed built environment, it is essential to develop a comprehensive vision for the area's development. This vision should emphasise mixed building typologies, blending residential, commercial, and recreational spaces to promote diversity, inclusivity, and a sense of place.

## 8. Insufficient Pedestrian Infrastructure

The current state of the area lacks adequate pedestrian infrastructure, making it challenging for pedestrians to navigate and access different parts of the neighbourhood. Insufficient sidewalk width, poor pavement conditions, and limited pedestrian crossings hamper walkability and safety (see Fig. 8). Prioritising the needs of pedestrians is crucial for creating a walkable and inclusive urban environment. Improving sidewalk conditions, expanding pedestrian pathways, providing clear signage, and incorporating safe and accessible pedestrian crossings can enhance the overall pedestrian experience and promote active transportation.

## 9. Defining Public and Private Boundaries

The existing urban fabric lacks clear delineation between public and private spaces, especially in proximity to social housing units. This ambiguity can lead to confusion and hinder community engagement. Establishing clear boundaries and crea-

ting well-defined public spaces can foster a sense of ownership, safety, and inclusivity. Creating designated public spaces like plazas, parks, and community centres encourages social interaction and community engagement. By promoting a sense of collective ownership and safety, these spaces can strengthen community bonds and contribute to a vibrant and cohesive neighbourhood.

## 5. Verdant Vertical Efficacy: Elevating Social Housing Through Botanic Green Walls for a Resilient and Ensured Residential Milieu

The designated area of investigation serves as a pivotal juncture of considerable untapped potential, as highlighted earlier, where diverse typologies of the pre-existing designed space and the organised surroundings intersect. The team apprehends this area as a composite of discrete, seemingly disparate subregions, which rest upon the „fissures“ resulting from past interventions, each necessitating distinct contemporary approaches. This underscores the belief held by the team that strategic micromanipulations can yield noteworthy transformations. Unfortunately, the current state of affairs remains below par, given the possibilities inherent in this locale. The prospect of enhancing the living conditions for its residents, coupled with its strategic positioning and potential impact on the urban landscape, propels our conviction that with appropriately tailored interventions, a myriad of positive outcomes can indeed be realised.

The anthropocentric methodology employed throughout the study necessitated a re-evaluation of privacy considerations within the confines of the Axiou Labor Housing complex. In this context, more pronouncedly than in comparable zones, efforts were directed towards the meticulous delineation of the notions of public, semi-public, semi-private, and private spheres, employing nuanced strategies to ameliorate the residents' habitation conditions. By replicating elements observed in other densely frequented locales within Thessaloniki, and incorporating ecologically amiable attributes, such as green walls, one can effectively delimit the area in a manner that lucidly discerns spaces allocated for communal utilisation from those designated for the denizens' exclusive use.

### 1. Microclimate Control and Environmental Benefits

Incorporating a vegetation green wall can facilitate the regulation of the microclimate within the housing project. The dense foliage of the green wall acts as a natural barrier, reducing the impact of harsh weather conditions and providing thermal insulation (see Fig. 9). Green walls have been found to have a small improvement in the microclimate of their surroundings (Balany et al. 2022). They can reduce the surface temperature of building walls, potentially reducing

indoor temperature (Balany et al., 2022). The presence of plants also improves air quality by filtering pollutants, enhancing the overall well-being and health of residents.

## 2. Air Purification

Green walls can help to improve air quality by absorbing pollutants such as nitrogen dioxide, ozone, and particulate matter (PM). They also release oxygen into the air, which can help to improve respiratory health. Paull et al. (2020) found that green walls could significantly reduce PM levels and Ysebaert et al. (2021) conclude that green walls have the potential to significantly reduce PM levels, especially in areas with high traffic or industrial pollution. This is important for the Xirokrini-Vardaris Area, a transportation nexus that serves as an internal distribution centre for the city.



Fig. 9: Conceptual design of the vegetation green wall

## 3. Privacy and Visual Limits

To ensure privacy and create visual limits, the front façade, where the bathrooms are located, can be adorned with vegetated green walls as well. This strategic placement not only shields the interior of the homes from external view but also creates an aesthetically pleasing environment. Residents can enjoy a sense of seclusion and tranquillity while maintaining a connection to nature. Additionally, the visual perception created by the green colour and plants can give a feeling of comfort and calmness, which can help reduce mental stress and improve cognitive function (Erçin & Usluer, 2022).

## 4. Security Enhancement

Integrating a green wall also serves as an additional security measure for the social housing project. The lush vegetation acts as a natural deterrent, creating a physical barrier that enhances the privacy and safety of residents (see Fig. 10). The dense foliage restricts unauthorised access and provides a sense of security and comfort within the living space.

The two previously mentioned key objectives will come into realisation through the simultaneous placement of small glass structures, a concept inspired by

the corresponding glass pavilions of Thessaloniki's Nea Paralia. In this case, their form is dictated by the architectural principles that govern the entirety of the Axios Social Housing Complex: Copy, Mirror, Rotate. Thus, through this partial transparency of the new buildings, the bridging of previous awkward voids is achieved, infusing an element from the broader urban context of Thessaloniki. These structures can accommodate activities of the tertiary sector that enhance focus, and by operating nearly round-the-clock, contribute to the natural security of the area.



Fig. 10: Aerial view of the design proposal

The accompanying figure is a proposal illustrating road sections within the Vardaris Xirokrini area.. Additionally, the image outlines the planned locations for the implementation of green walls and glass buildings.

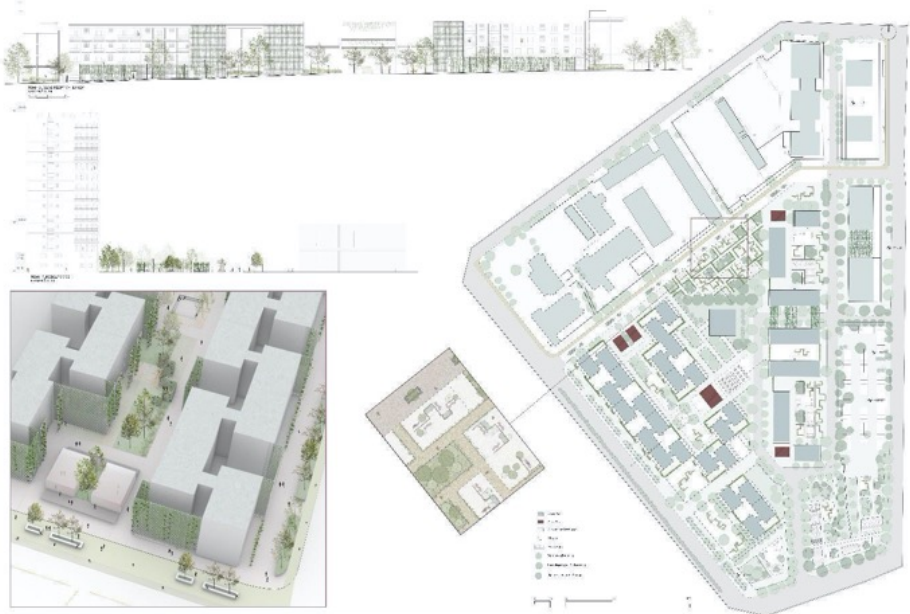


Fig. 11: Design proposal and sections of site area

In pursuit of the continuation of this vision, the purpose is to create spaces where the inhabitants of the area can gather not just to reside, but to learn, create, work, play, and live together. The eastern part of the study area offers the most suitable location for realising this dream as mentioned while first visiting the area of study. This area, situated at the junction between the central and off-centre parts, experiences heightened foot traffic. Most of the ground-level spaces are occupied by various stores, while several workshops also operate here (see Fig. 12). Nevertheless, the prevailing inward focus inhibits its development. The objective is to counteract this tendency and highlight these workshops, aiming to pique the citizens' interest.

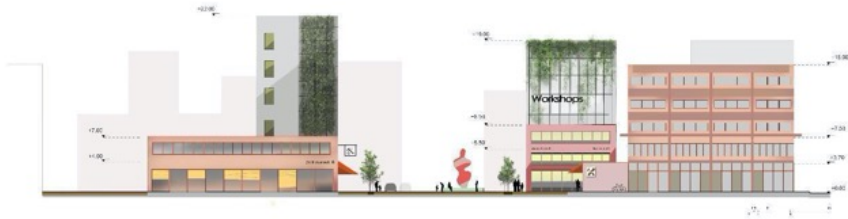


Fig.12: Section of Vakchou Street

These workshops are situated at the intersection of Vakchou Street and Tandaulou Street. These two thoroughfares operate on a scheduled basis and function as woonerf streets. They feature pavement composed of more forgiving tiles and experience reduced vehicular traffic, rendering them safe environments for local residents to access and visit (see Fig.13)

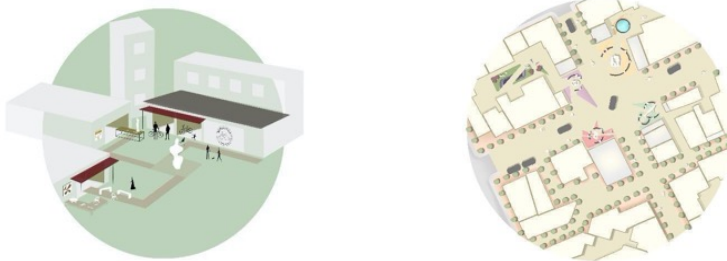


Fig. 13: Design proposal for open public spaces

What's more, vacant, undeveloped spaces transform into public open areas that call upon people to points of interest in the area, such as focal points, small interior plazas within the uncovered spaces of the building blocks, small parks, open-air cinemas (see Fig. 14). In this manner, the inactive facades of the buildings are brought to life, while the human potential within the area engages in creative activity.



Fig. 14: Design proposal section of the unbuilt area between buildings

Last but not least, a green network that includes building facades and rooftops and spreads through uncovered spaces, is directed towards its natural release points in the already established green parks and playgrounds, leading people back to where it originated from (see Fig. 15).



Fig. 15: Design proposal section of Ioannou Farmaki Street

## 6. Conclusion

To conclude, the designated area under investigation holds untapped potential as a vital intersection where various elements of the existing designed space and organised surroundings intersect. The team envisions this space as a combination of discrete subregions shaped by past interventions, necessitating distinct contemporary approaches for transformation. Despite the current state falling short of its potential, the team believes that strategic micro-level interventions can lead to significant positive outcomes for the area's residents and their impact on the urban landscape.



The anthropocentric approach adopted in the study prompts a re-evaluation of privacy considerations within the Axios Labor Housing complex. The meticulous differentiation of public, semi-public, semi-private, and private spheres using nuanced strategies is central to this re-evaluation. Incorporating green walls and emulating successful practices from similar areas within Thessaloniki allows for a clear distinction between communal and exclusive spaces, ultimately enhancing living conditions while fostering connections with nature.

The proposed interventions encompass various benefits, including microclimate regulation through vegetation, sand mitigation, flood prevention, privacy enhancement, and improved security. Additionally, the incorporation of small glass structures inspired by Nea Paralia's pavilions aligns with the architectural principles of the Axios Social Housing Complex, bridging voids and offering opportunities for continuous activities.

By establishing environments where the residents can come together not only to dwell but also to engage in learning, creatively endeavour and work and truly co-living, the area is given back the element it lacked. The eastern section of the study area stands out as the most suitable site for materialising this aspiration. Vice versa, this area seeks to be transformed into a space where residents would not only live but also learn, work, and play, guided by the green flow that directs them to established green areas. So, connecting vacant and communal open spaces through a green network to beckon people into small inner plazas, compact parks and open-air cinemas, can ultimately work beneficially as the significant difference between the studied area and the rest of the city. After all, the individual, the human being, constitutes an integral element of the architectural conception.

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## Revitalising Public Spaces through a Sustainable Urban Design

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# Conclusion

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The Thessaloniki Summer School 2023 on „The future of central urban areas of Thessaloniki“ has been a particularly creative and fruitful experience as part of the university partnership “Centre of the Future – Challenges and Opportunities for Sustainable Development” between AUTH (Faculty of Engineering and School of Architecture) and LUH (Faculty of Architecture and Landscape, Institute of Environmental Planning).

By focusing on central areas of Thessaloniki – in particular the Vardaris-Xirokri area next to the city’s Central Train Station –, the Summer School provided the opportunity for the students of both academic institutions to jointly reflect on a wide variety of urban issues through urban planning and design approaches. Among others, these are issues of historical and spatial path dependencies, liveability and equity, economic vibrancy and social cohesion, enhancing public spaces, expanding green spaces, making cities more walkable and less car-dependent, and engaging civil society through inclusive participation. At the same time, the Summer School formed the ground for experimenting on novel ideas, concepts, strategies, design and planning solutions to meet important urban challenges.

The focus on the particularities of Thessaloniki’s central areas was enriched by wider discussions about current challenges and opportunities for European cities in general, and the ways urban planning and design can positively contribute. These brought to the fore some questions of critical significance: How can urban planning and design respond to the ongoing social, economic, and environmental transformations in times of various crises like pandemics or climate risks and hazards? How can we move beyond existing restrictions towards sustainable patterns of urban development, urban mobility, and urban co-existence and well-being, paying attention to diversified human needs?

## Conclusion

As part of an ongoing partnership to be continued, the Summer School 2023 served as a two-way street between LUH and AUTh, Hanover and Thessaloniki, to identify similarities and particularities, to share and exchange experiences, ideas, and practices, and to explore the future of European cities.



# Centres of the Future

European cities such as Thessaloniki and Hanover are facing major transformations and continue to experience increasing challenges today, such as the Covid-19 pandemic or the financial crisis. Current challenges among European cities present similarities but also differentiations and local specificities. Different threats intensified structural upheavals and impacted various sectors, such as health, retail, labour and mobility. Therefore, a number of these challenges are exacerbated.

The publication summarises the contributions of a Summer School 2023 in Thessaloniki that focused on „The future of central urban areas of Thessaloniki“ and the discussion of approaches and strategies coping with some of the above mentioned challenges in central urban areas. The Summer School is a central cornerstone of the University partnership for joint educational and research activities at the Leibniz University of Hanover (Faculty of Architecture and Landscape, Institute of environmental planning) and the Aristotle University of Thessaloniki – AUTH (Faculty of Engineering, School of Architecture). It is funded by the German Academic Exchange Service (DAAD) as part of the project “Centres of the Future“ (FutureCentres).

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